MIL-STD-1395B
6 March 1987

SUPERSEDING
MIL-STD-1395A
26 June 1979

MILITARY STANDARD

FILTERS AND NETWORKS, SELECTION AND USE OF

AMSC N/A

FSC 59GP

DEPARTMENT OF DEFENSE
Washington, D.C. 20301

Filters and Networks, Selection and Use of

1. This Military Standard is approved for use by all Departments and Agencies of the Department of Defense.

2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Space and Naval Warfare Systems Command, ATTN: SPAWAR 003-1212, Washington, D.C. 20363 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

FOREWORD

This standard provides selected standard filters and networks for use in the design of military equipment.

The application information and performance characteristics contained in this standard are offered for guidance and are not to be considered as mandatory. Additional application information will be added when coordinated with the three military departments.

Additional sections of this standard will be developed as the standard filters and networks of a given specification family are selected and coordinated with the three military departments.

CONTENTS

TABLES

SECTIONS

1. SCOPE

1.1 Scope. This standard consists of the following:

a. Selected standard filter and network styles and types, detailed by sections, chosen jointly by the Department of the Army, the Navy and the Air Force for use in new design and manufacture of military equipment under the jurisdiction of the Departments.

b. Guides for the choice and use of filters and networks for new military equipment.

Detailed requirements for filters and networks listed in this standard are covered in the applicable specification (see 2.1). When it has been determined that circuit requirements cannot be met by using the filter and network styles and types, or characteristics listed in this standard, the design engineer shall, with the approval of the cognizant military activity, select from the applicable filter or network specification styles, types, or characteristics not listed herein.

1.2 Purpose of standard. The purpose of this standard is to:

a. Provide the designers of new equipment with a selection of standard filters and networks for military application.

b. Control and minimize the variety of filters and networks used in military equipment in order to facilitate logistic support of the equipment in the field.

c. Outline criteria pertaining to the use of filters and networks for design purposes for new equipment.

2. REFERENCED DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standard. Unless otherwise specified, the following specifications and standard of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation form a part of this standard to the extent specified herein.

SPECIFICATIONS

FEDERAL

QQ-N-281 - Nickel-Copper Alloy Bar, Rod, Plate, Sheet, Strip, Wire, Forgings, and Structural and Special Shaped Sections.

MILITARY

MIL-F-15733 - Filters and Capacitors, Radio Frequency Interference, General Specification For.
MIL-F-18327 - Filter, High Pass, Low Pass, Band Pass, Band Suppression and Dual Functioning, General Specification for.
MIL-F-28861 - Filters and Capacitors, Radio Frequency/Electromagnetic Interference Suppression.

STANDARD

MILITARY

MIL-STD-220 - Method of Insertion-loss Measurement.

(Copies of the specifications and standard required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

2.2 Order of precedence. In the event of a conflict between the text of this standard and the references cited herein the text of this standard shall take precedence.

3. DEFINITIONS

3.1 The definitions used in this standard are as specified in MIL-F-15733, MIL-F-19327, MIL-F-28861 and MIL-STD-220.

4. GENERAL REQUIREMENTS

4.1 Choice of filter and network types. The variety of filter and network types used in any particular equipment shall be the minimum necessary to obtain satisfactory performance. Where more than one type filter or network may be used in a given application (i.e., L-C, R-C, L-R, electromechanical, piezo-electric crystal, etc.) consideration should be given to cost and availability (use of strategic materials, multiple sources, etc.). The filters and networks identified in this standard meet all the criteria for standard types (see 1.1 and 4.4).

4.1.1 Qualified sources. After a preliminary selection of the desired filter or network has been made, reference should be made to the applicable qualified products list (QPL) for listing of qualified sources.

4.2 Item identification. Part numbers are used to identify the filters and networks listed in this standard, and shall be as specified in the individual filter or network specification. Type designations may be constructed as indicated in examples given in applicable sections of this standard, and are given for information only.

4.3 Conflict of requirements. In the event of conflict between the technical requirements of filters or networks described in this standard and the applicable specification, the specification shall govern; however, this standard will be updated concurrently to reflect specification changes.

4.4 Criteria for inclusion in this standard. The criteria for inclusion in this standard are as follows:

a. The filters and networks shall be the best type available for general use in military equipment.

b. Coordinated military specifications shall be available.

c. There shall be at least one qualified source.

d. The filters and networks shall be in or shall have been in production.

e. Where possible, the filter and the network shall remain in the section for a minimum of one year.

f. Filters and networks shall be used for design purposes for new equipment.

5. DETAILED REQUIREMENTS

5.1 Detailed specification sheet for standards. The detailed requirements for standard filter and network types are contained in the applicable specification and the applicable section of this standard.

6. NOTES

6.1 General application information. See Appendix.

6.2 Metric equivalents. The metric equivalents provided in the individual sections are for general information only.

6.3 International standardization agreement. Certain provisions of this standard are the subject of international standardization agreement (NEPR 19). When revision or cancellation of this standard is proposed which will affect or violate the international agreement concerned, the preparing activity will take appropriate reconciliatory action through international standardization channels, including departmental standardization offices, if required.

6.4 Subject term (key word) listing.

Capacitor, feedthrough
Capacitor, radio frequency interference
Filter, band pass
Filter, electric wave
Filter, high pass
Filter, low pass
Filter, radio frequency interference

6.5 Changes from previous issue. Asterisks or vertical lines are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

APPENDIX

10. GENERAL

10.1 Scope. The application information in this standard is designed to assist the engineer in selecting the filter that will be specified. As with other types of components, the users decision upon which types of filters are best for the military equipment being designed is critical. Proper selection in its broadest sense is the first step in building reliable equipment. A thorough knowledge of the types and varieties of filters available is essential for this selection. The engineer should be familiar with the physical properties of the component, construction methods, environmental factors, and circuit function, as well as, advantages and disadvantages of the component and reciprocal circuit responses and interactions. The engineer should be fully aware of what makes filters fail and an intimate working knowledge of the applicable military specification is also an extremely desirable asset. This appendix is a mandatory part of this standard.

10.2 Filter types. This standard covers radio frequency interference filters and electric wave filters. Table I provides a selection guide for radio frequency interference filters covered by MIL-F-15733 (section 100). Table II provides a selection guide for electric wave filters covered by MIL-F-18327 (Section 200). Table III provides a selection guide for radio frequency interference filters and capacitors covered by MIL-F-28861 (section 300).

TABLE I. Filter, radio frequency interference suppression, selection guidance (section 100).

Applicable specification	Rated voltage (volts)	Rated current (amperes)	Circuit types
Broadband types - section 101			
MIL-F-15733/27	200 V dc, 125 V ac	.7,1,1.5,2,3,4,5,10,15	L_1, L_2, pi, T
MIL-F-15733/67	100 V dc	.5, 1, 3	L_1, L_2, pi
MIL-F-15733/72	100 V dc, 30 V ac	.5,1,3,5,10,20,30,50	L_1,L_2, pi, T,$2L_1$, $2L_2$
MIL-F-15733/73	400 V dc, 115 V ac	.5,1,3,5,10,20,30,50	L_1,L_2, pi, T,$2L_1$, $2L_2$
MIL-F-15733/75	400 V dc, 115 V ac	3, 5, 10, 20, 30, 50	pi
High frequency types - section 102			
Bolt styles			
MIL-F-15733/61	200 V dc, 140 V rms 100 V dc, 70 V rms 500 V dc, 350 V rms 100 V dc	25, 10, 5	pi, L_2
Solder-in styles			
MIL-F-15733/33	125 V dc, 90 V rms	10	pi
MIL-F-15733/62	200 V dc, 140 V rms	10	pi
MIL-F-15733/62	100 V dc, 70 V dc	10	pi
MIL-F-15733/64	70 V dc	10	pi
Multiple circuit types			
MIL-F-15733/63	350 V dc, 250 V rms	10	pi

APPENDIX

TABLE II. Electric wave filters, selection guidance (section 200).

Part number M19327/	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)
	Source	Load		
High pass electric wave filters - section 201				
031-001	10 K	10 K	250	2 max
031-002	"	"	500	"
031-003	"	"	750	"
031-004	"	"	1,000	"
031-005	"	"	1,500	"
031-006	"	"	2,000	"
031-007	"	"	2,500	"
031-008	"	"	3,000	"
031-009	"	"	4,000	"
031-010	"	"	5,000	"
031-011	"	"	6,000	"
031-012	"	"	10,000	"
031-013	"	"	12,000	"
031-014	"	"	15,000	"
031-015	"	"	24,000	"
031-016	600	600	200	"
031-017	"	"	1,000	"
031-018	"	"	1,500	"
031-019	"	"	2,500	"
031-020	"	"	5,000	"
031-021	"	"	15,000	"
031-022	"	"	35,000	"
048-001	10 K	10 K	1,000	1 "
025-001	10 K	10 K	3,000	2 "
Low pass electric wave filters - section 202				
047-001	100 K	100 K	4	3 max
030-001	10 K	10 K	25	2 "
030-002	"	"	10	"
030-003	"	"	20	"
030-004	"	"	30	"
030-005	"	"	40	"
030-006	"	"	80	"
030-007	"	"	100	"
030-008	"	"	160	"
030-009	"	"	200	"
030-010	"	"	300	"
030-011	"	"	400	"
030-012	"	"	500	"
030-013	"	"	600	"
030-014	"	"	800	"
030-015	"	"	1,000	"
030-016	"	"	2,000	"
030-017	600	600	100	"
030-018	"	"	200	"
030-019	"	"	400	"
030-020	"	"	500	"
030-021	"	"	600	"
030-022	"	"	800	"
030-023	"	"	1,600	"
030-024	"	"	2,000	"
030-025	"	"	2,400	"
018-001	10 K	10 K	50	3 "
051-002	"	"	120	2 "
051-001	"	"	1,000	1 "
032-001	"	"	1,000	1 "

TABLE II. Electric wave filters, selection guidance (section 200) - Continued.

Bandpass electric wave filters - section 203				
Part number M18327/	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)
	Source	Load		
023-001	10 K	20 M	40	Gain -3 min
029-001	550	550	53	16 max
033-001	100 K	100 K	400	8 max
046-001	10 K	10 K	400	8 max
024-001	10 K	10 K	405	10 max
	10 K	20 M	405	Gain -3 min
046-004	10 K	10 K	560	8 max
046-005	10 K	10 K	730	8 max
046-006	10 K	10 K	960	6 max
046-007	10 K	10 K	1,000	6 max
046-008	10 K	10 K	1,300	6 max
046-009	10 K	10 K	1,700	6 max
046-010	10 K	10 K	2,300	6 max
034-001	100 K	100 K	2,300	8 max
046-011	10 K	10 K	3,000	6 max
046-012	10 K	10 K	3,900	6 max
046-013	10 K	10 K	4,000	6 max
046-014	10 K	10 K	5,400	6 max
046-002	10 K	10 K	7,350	8 max
046-015	10 K	10 K	8,000	6 max
046-016	10 K	10 K	10,500	6 max
046-017	10 K	10 K	12,000	6 max
067-001	1000±15%	2000±1%	12,015	7.5 ±1.5
045-018	10 K	10 K	14,500	6 max
046-029	10 K	10 K	22,000	3 max
046-019	10 K	10 K	22,000	6 max
046-030	10 K	10 K	30,000	3 max
046-020	10 K	10 K	30,000	6 max
019-001	500	500	40,000	3 max
046-031	10 K	10 K	40,000	3 max
046-021	10 K	10 K	40,000	6 max
046-032	10 K	10 K	52,500	3 max
046-022	10 K	10 K	52,500	6 max
046-023	10 K	10 K	56,000	6 max
046-033	10 K	10 K	70,000	3 max
046-024	10 K	10 K	70,000	6 max
046-034	10 K	10 K	93,000	3 max
046-025	10 K	10 K	96,000	6 max
046-035	10 K	10 K	124,000	3 max
046-026	10 K	10 K	124,000	6 max
046-027	10 K	10 K	160,000	6 max
046-036	10 K	10 K	165,000	3 max
046-028	10 K	10 K	165,000	6 max
027-001	2 K	2 K	18.6 M	3 max

APPENDIX

TABLE III. Filters and capacitors, radio frequency/electromagnetic interference suppression, MIL-F-28861, selection guidance (section 300).

Broadband types					
Applicable specification	Rated voltage (volts)	Rated current (amperes)	Circuit types	Minimum capacitance (μF)	Product assurance level
MIL-F-28861/1	200 V dc/125 V ac, 100 V dc, 70 V dc	15	L_2, C	.15,.45,.7	B
MIL-F-28861/2	100 V dc	.25,1.0,3.0, 5.0	L_1,L_2,pi	.45,.90	B
MIL-F-28861/4	70 V dc	.1,.3,.5,1.0, 3.0, 5.0	L_1,L_2,pi	.70,1.4	B
MIL-F-28861/5	200 V dc/125 V dc	.25,1.0,3.0, 5.0	L_1,L_2,pi	.15,.30	B

20. REFERENCED DOCUMENTS. Not applicable.

Custodians:
Army - ER
Navy - EC
Air Force - 11

Review activities:
Army - ME, MI, SL
Air Force - 85, 99
DLA - ES

User activities:
Army - AT, AV, SM
Navy - AS, MC, OS, SH
Air Force - 19

Preparing activity:
Navy - EC

Agent:
DLA - ES

(Project 59GP-0054)

SECTION 100

FILTERS, RADIO FREQUENCY INTERFERENCE (MIL-F-15733)

Section

SECTION 101

FILTERS, RADIO FREQUENCY INTERFERENCE

BROADBAND TYPES

FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED,

STYLE FL15, GRADE 3

Rated voltage: 200 V dc, 125 V rms to 400 Hz.

Rated current: See table 101-I.

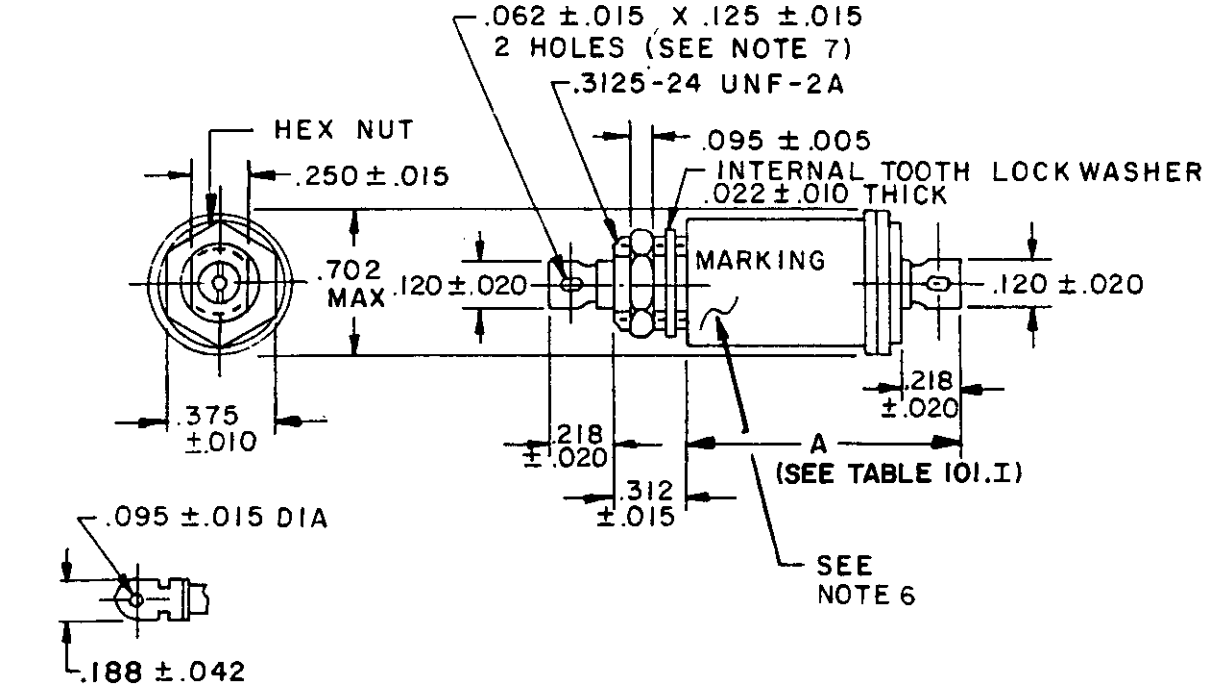
Operating temperature range: -55°C to +125°C.

Temperature rise: 25°C, maximum.

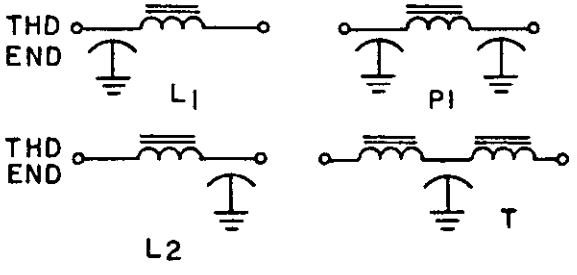
Overload: 140 percent of rated current.

Insertion loss: See table 101-I.

Part number: M15733/27- (dash number from table 101-I).



L TERM TO ACCEPT NO. 12 AWG
DETAIL FOR DASH NO.-0014 AND-0015



CIRCUIT DIAGRAMS

FIGURE 101-1. Case dimensions and circuit diagrams.

Inches	mm
.005	0.13
.010	0.25
.015	0.38
.020	0.51
.022	0.56
.042	1.07
.062	1.57
.070	1.78
.095	2.41
.120	3.05
.125	3.18
.188	4.78
.218	5.54
.250	6.35
.312	7.92
.375	9.53
.702	17.83
.900	22.86
1.031	26.19
1.195	30.35
1.763	44.78

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Circuit diagrams are for information only.
4. All filters shall be supplied with mounting hardware.
5. Use of style FL15 with or without shoulder is optional.
6. Terminal identification (non-symmetrical filters): The case shall be marked at the threaded end of the filter with the symbol "C" or "L" as follows:

Symbol	Circuit
C	L_1
L	L_2

7. Optional terminal hole of .070 ±.010 inch diameter may be supplied.

FIGURE 101-1. Case dimensions and circuit diagrams.- Continued.

TABLE 101-I. Electrical characteristics (M15733/27).

Dash number	Circuit diagram	Dimension A (max) (inches) 1/	Maximum rated current (amperes, rms)	Maximum voltage drop (volts, ac rms)	Maximum voltage drop volts dc	Capacitance µF -0, +150 percent	Minimum full-load insertion loss (dB) in accordance with MIL-STD-220 2/ At +25°C: 50 kHz	100 kHz	150 kHz	300 kHz	1 MHz	10 MHz	100 MHz	1 GHz	At -55°C and +125°C: 50 kHz	100 kHz	150 kHz	300 kHz	1 MHz	10 MHz	100 MHz	1 GHz
0001	L_1	.900	1.00	.4	.27	.25	11	18	25	37	58	80	70	70	10	17	24	36	57	80	70	70
0002	L_2	.900	1.00	.4	.27	.25	11	18	25	37	58	80	70	70	10	17	24	36	57	80	70	70
0003	pi	1.031	1.00	.4	.27	.5	20	32	43	61	80	80	70	70	18	30	41	60	80	80	70	70
0004	pi	1.195	1.00	.35	.25	.5	20	36	47	65	80	80	70	70	18	34	45	63	80	80	70	70
0005	L_1	.900	3.00	.15	.10	.25	5	10	14	21	39	80	70	70	4	9	13	20	39	80	70	70
0006	L_2	.900	3.00	.15	.10	.25	5	10	14	21	39	80	70	70	4	9	13	20	39	80	70	70
0007	pi	1.031	3.00	.15	.15	.5	5	10	19	42	74	80	70	70	5	2	16	40	72	80	70	70
0008	L_1	.900	5.00	.10	.08	.25	5	10	13	19	32	69	70	70	4	9	12	18	31	68	70	70
0009	L_2	.900	5.00	.10	.08	.25	5	10	13	19	32	69	70	70	4	9	12	18	31	68	70	70
0010	pi	1.195	5.00	.15	.12	.5	---	---	10	28	64	80	70	70	---	---	10	26	62	80	70	70
0011	L_1	1.031	10.00	.075	.05	.25	5	8	13	19	30	61	70	70	4	7	12	18	29	60	70	70
0012	L_2	1.031	10.00	.075	.05	.25	5	8	13	19	30	61	70	70	4	7	12	18	29	60	70	70
0013	pi	1.195	10.00	.085	.075	.5	---	---	16	18	48	80	70	70	---	---	15	18	48	80	70	70
0014	L_1	1.763	15.00	.15	.10	.25	9	15	19	25	36	60	70	70	9	14	18	24	35	59	70	70
0015	L_2	1.763	15.00	.15	.10	.25	9	15	19	25	36	60	70	70	9	14	18	24	35	59	70	70
0016	T	1.195	.70	.42	.4	.25	19	28	38	56	80	80	70	70	17	27	37	55	80	80	70	70
0017	T	1.195	1.50	.225	.20	.25	6	12	19	32	62	70	70	70	4	11	18	32	61	70	70	70
0018	T	1.195	4.00	.12	.10	.25	6	11	14	21	36	70	70	70	5	10	13	19	35	70	70	70
0019	L_1	.900	2.00	.2	.10	.25	5	11	15	25	45	80	70	70	4	10	14	24	44	80	70	70
0020	L_2	.900	2.00	.2	.10	.25	5	11	15	25	45	80	70	70	4	10	14	24	44	80	70	70
0021	pi	1.031	2.00	.2	.15	.5	1	15	28	48	79	80	70	70	1	12	26	46	77	80	70	70
0022	pi	1.195	2.00	.22	.15	.5	4	24	36	54	80	80	70	70	2	21	34	52	80	80	70	70
0023	T	1.195	2.00	.17	.16	.25	5	11	15	25	51	70	70	70	4	10	14	24	49	70	70	70

1/ Metric equivalents are given on figure 101-1.

2/ Full load insertion loss measurements shall be performed at frequencies between 100 kHz to 10 MHz inclusive; all other measurements shall be performed at no load.

FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED

STYLE FL88

Rated voltage: 100 V dc.

Rated current: See table 101-II.

Operating temperature range: -55°C to +125°C.

Temperature rise: 25°C, maximum.

Overload: 140 percent of rated current.

Insertion loss: See table 101-II.

Part number: M15733/67- (dash number from table 101-II).

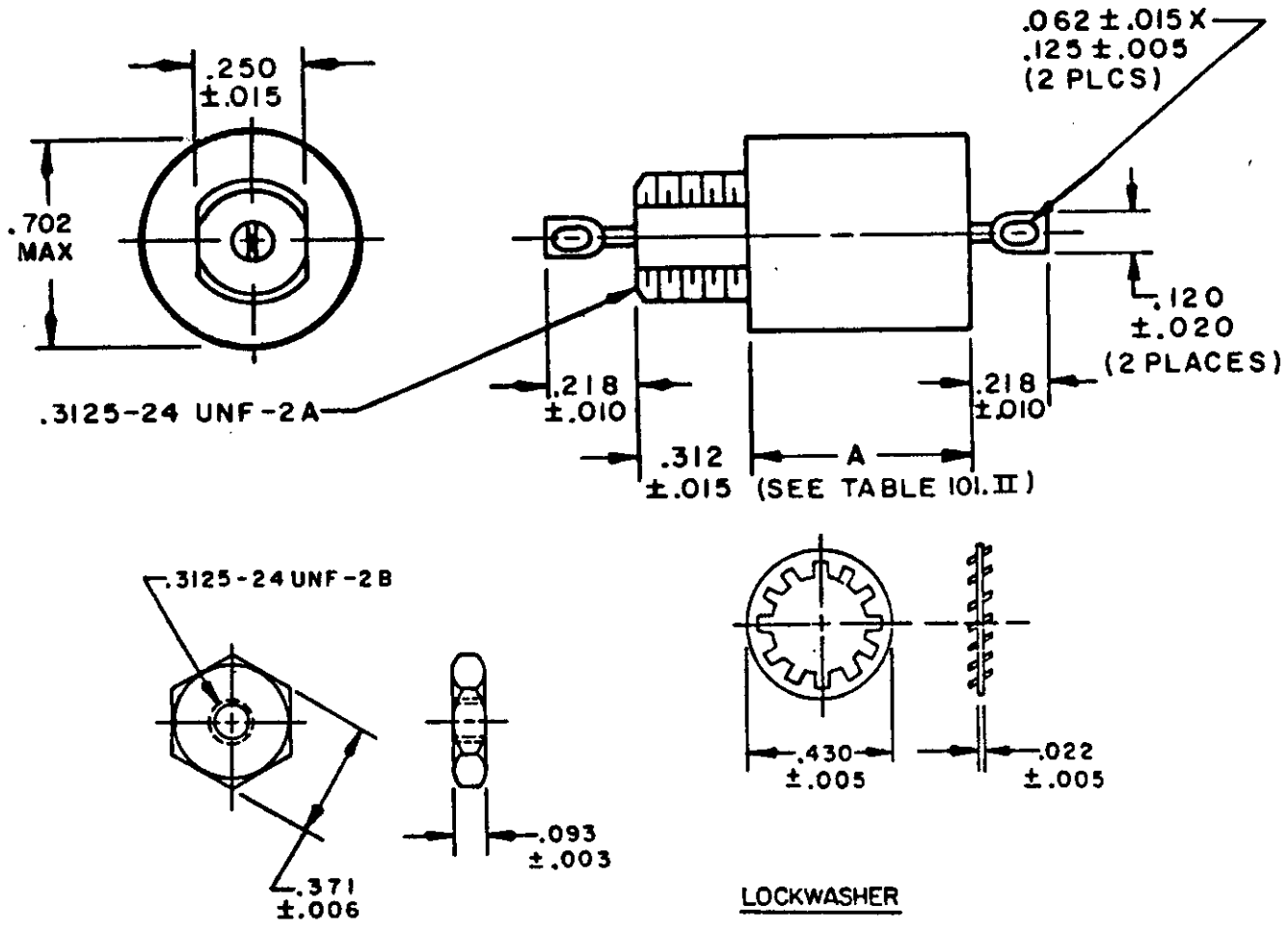
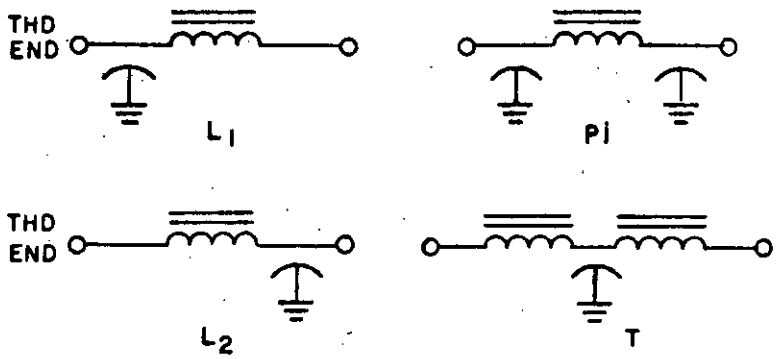


FIGURE 101-2. Case dimensions and circuit diagrams.

FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED,

STYLE FL88



CIRCUIT DIAGRAMS

Inches	mm	Inches	mm
.003	0.08	.120	3.05
.005	0.13	.125	3.18
.006	0.15	.218	5.54
.010	0.25	.250	6.35
.015	0.38	.312	7.92
.020	0.51	.371	9.42
.022	0.56	.430	10.92
.062	1.57	.702	17.83
.093	2.36		

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Circuit diagram is for information only.
4. All filters shall be supplied with mounting hardware.
5. Recommended mounting torque: 60 in-oz maximum.
6. Terminal identification (non-symmetrical filters): The case shall be marked at the threaded end of the filter, with the symbol "C" or the symbol "L", as follows:

Circuit	Symbol
L_1	C
L_2	L

FIGURE 101-2. Case dimensions and circuit diagrams - Continued.

FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED,

STYLE FL88

TABLE 101-II. Dimensions and electrical characteristics (MIL-F-15733/67).

Dash number	Rated dc voltage (volts)	Rated current (amperes)	Circuit diagram	Dimension A ±.030	Insulation resistance minimum (megohms)	Voltage drop (volts)	Insertion loss dB 1/					
							75 kHz	150 kHz	300 kHz	1 MHz	10 MHz	1 GHz
0001	100	.5	L_2	.875	300	.15	35	46	58	70	70	70
0002	100		L_1									
0003	100	1	L_2	.875	300	.21	30	40	52	70	70	70
0004	100		L_1									
0005	100	3	L_2	.875	700	.09	20	29	37	55	70	70
0006	100		L_1									
0007	100	5	L_2	.875	700	.035	20	28	34	46	70	70
0008	100		L_1									
0009	100	.5	pi	1.170	350	.15	55	75	80	80	80	80
0010	100	1	pi	1.170	350	.21	52	69	80	80	80	80
0011	100	3	pi	1.170	350	.09	26	48	66	80	80	80
0012	100	5	pi	1.170	350	.10	15	38	58	80	80	80
0013	100	2	T	1.170	700	.16	16	40	50	70	70	70

1/ No-load insertion loss measurement shall be performed at 75 kHz and 1 GHz. Full-load insertion loss measurement shall be performed from 150 kHz to 10 MHz.

FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED,

STYLE FL54

Rated voltage: 100 V dc, 30 V ac from dc to 400 Hz.

Rated current: See table 101-III.

Operating temperature range: -55°C to +125°C.

Temperature rise:

25°C for parts rated up to and including 10 amperes.
35°C for parts rated above 10 amperes.

Maximum voltage drop: 1.0 volts maximum.

Insulation resistance:

At +25°C: 1,000 megohms minimum
At +125°C: 100 megohms minimum

Insertion loss:

At +25°C:	Shall be as specified in table 101-III
At -55°C and +125°C:	A degradation of 2 dB from the value specified in table 101-III shall be allowed up to 10 MHz.

Part number: M15733/72- (dash number from table 101-III).

TABLE 101-III. Electrical characteristics (MIL-F-15733/72).

Dash number	Circuit diagram	Rated current (amperes) ac (rms) or dc	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/									
			At +25°C									
			14 kHz	20 kHz	50 kHz	150 kHz	300 kHz	600 kHz	1 MHz	10 MHz	100 MHz	1 GHz
0001	L_1	.5	---	---	---	30	40	50	60	60	60	60
0002	L_2	"	---	---	---	30	40	50	"	"	"	"
0003	L_1	"	---	---	---	50	60	60	"	"	"	"
0004	L_2	"	---	---	---	50	60	60	"	"	"	"
0005	L_1	1.0	---	---	---	30	40	50	"	"	"	"
0006	L_2	"	---	---	---	30	40	50	"	"	"	"
0007	L_1	"	---	---	---	50	60	60	"	"	"	"
0008	L_2	"	---	---	---	50	60	60	"	"	"	"
0009	L_1	3.0	---	---	---	30	40	50	"	"	"	"
0010	L_2	"	---	---	---	30	40	50	"	"	"	"
0011	L_1	"	---	---	---	40	50	60	"	"	"	"
0012	L_2	"	---	---	---	40	50	60	"	"	"	"
0013	L_1	5.0	---	---	---	30	40	50	"	"	"	"
0014	L_2	"	---	---	---	30	40	50	"	"	"	"
0015	L_1	"	---	---	---	40	50	60	"	"	"	"
0016	L_2	"	---	---	---	40	50	60	"	"	"	"

See footnote at end of table.

TABLE 101-III. Electrical characteristics (MIL-F-15733/72) - Continued.

Dash number	Circuit diagram	Rated current (amperes) ac (rms) or dc	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/									
			At +25°C									
			14 kHz	20 kHz	50 kHz	150 kHz	300 kHz	500 kHz	1 MHz	10 MHz	100 MHz	1 GHz
0017	$2L_1$	.5	---	10	40	75	80	80	80	80	80	80
0018	$2L_2$	.5	---	10	40	75	80	"	"	"	"	"
0019	$2L_1$	1.0	---	10	40	75	80	"	"	"	"	"
0020	$2L_2$	1.0	---	10	40	75	80	"	"	"	"	"
0021	$2L_1$	3.0	---	---	30	65	80	"	"	"	"	"
0022	$2L_2$	3.0	---	---	30	65	"	"	"	"	"	"
0023	$2L_1$	5.0	---	---	30	65	"	"	"	"	"	"
0024	$2L_2$	5.0	---	---	30	65	"	"	"	"	"	"
0025	$2L_1$	10.0	---	---	30	65	"	"	"	"	"	"
0026	$2L_2$	10.0	---	---	30	65	"	"	"	"	"	"
0027	$2L_1$	20.0	---	---	10	55	"	"	"	"	"	"
0028	$2L_2$	20.0	---	---	10	55	"	"	"	"	"	"
0029	$2L_1$	30.0	---	---	10	55	"	"	"	"	"	"
0030	$2L_2$	30.0	---	---	10	55	"	"	"	"	"	"
0031	$2L_1$	50.0	---	---	10	55	"	"	"	"	"	"
0032	$2L_2$	50.0	---	---	10	55	"	"	"	"	"	"

See footnote at end of table.

TABLE 101-III. Electrical characteristics (MIL-F-15733/72) - Continued.

Dash number	Circuit diagram	Rated current (amperes) ac (rms) or dc	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/									
			At +25°C									
			14 kHz	20 kHz	50 kHz	150 kHz	300 kHz	600 kHz	1 MHz	10 MHz	100 MHz	1 GHz
0033	pi	.5	---	---	---	40	60	75	80	80	80	80
0034	"	.5	---	---	---	60	80	80	"	"	"	"
0035	"	.5	---	---	---	80	80	80	"	"	"	"
0036	"	1	---	---	---	40	60	75	"	"	"	"
0037	"	1	---	---	---	60	80	80	"	"	"	"
0038	"	1	---	---	---	80	80	80	"	"	"	"
0039	"	3	---	---	---	40	60	75	"	"	"	"
0040	"	3	---	---	---	60	80	80	"	"	"	"
0041	"	3	---	---	---	80	80	80	"	"	"	"
0042	"	5	---	---	---	40	60	75	"	"	"	"
0043	"	5	---	---	---	60	80	80	"	"	"	"
0044	"	5	---	---	---	80	80	80	"	"	"	"
0045	"	10	---	---	---	40	60	75	"	"	"	"
0046	"	10	---	---	---	60	80	80	"	"	"	"
0047	"	10	---	---	---	80	80	80	"	"	"	"
0048	"	20	---	---	---	40	60	75	"	"	"	"
0049	"	20	---	---	---	60	80	80	"	"	"	"

See footnote at end of table.

TABLE 101-III. Electrical characteristics (MIL-F-15733/72) - Continued.

Dash number	Circuit diagram	Rated current (amperes) ac (rms) or dc	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/									
			At +25°C									
			14 kHz	20 kHz	50 kHz	150 kHz	300 kHz	600 kHz	1 MHz	10 MHz	100 MHz	1 GHz
0050	pi	30.0	---	---	---	40	60	75	80	80	80	80
0051	"	30.0	---	---	---	60	80	80	"	"	"	"
0052	"	50.0	---	---	---	40	60	75	"	"	"	"
0053	"	50.0	---	---	---	60	80	80	"	"	"	"
0054	T	.5	---	---	---	45	60	70	70	70	70	70
0055	"	.5	20	28	50	60	60	60	60	"	"	"
0056	"	1.0	---	---	---	35	50	60	70	"	"	"
0057	"	1.0	20	28	50	60	60	60	60	"	"	"
0058	"	3.0	---	---	---	25	35	45	"	"	"	"
0059	"	3.0	20	26	45	60	60	60	"	"	"	"
0060	"	5.0	---	---	---	25	35	45	"	"	"	"
0061	"	5.0	20	26	45	60	60	60	"	"	"	"
0062	"	10.0	---	---	---	25	35	45	50	"	"	"
0063	"	10.0	15	18	28	37	45	53	58	"	"	"
0064	"	20.0	---	---	---	25	35	45	50	"	"	"
0065	"	20.0	15	18	28	37	45	53	58	"	"	"

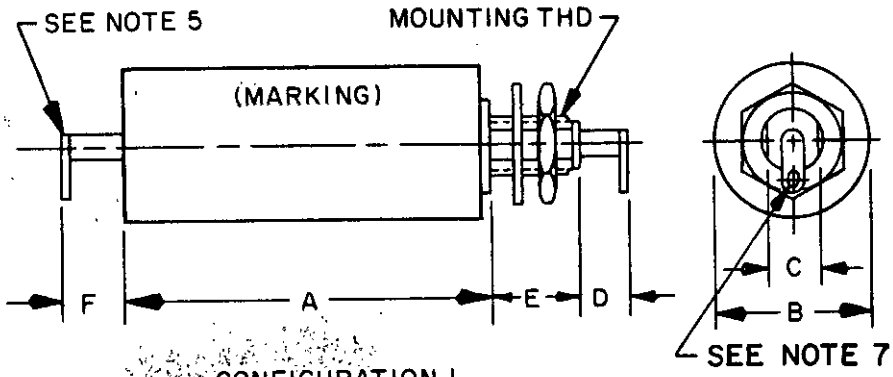
See footnote at end of table.

TABLE 101-III. Electrical characteristics (MIL-F-15733/72) - Continued.

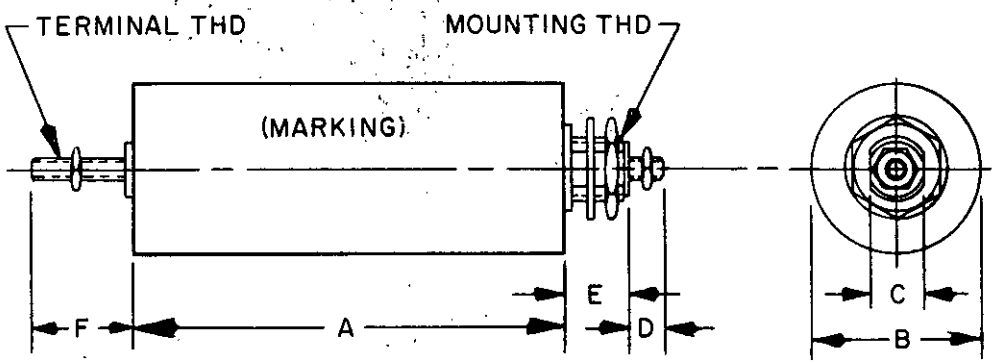
Dash number	Circuit diagram	Rated current (amperes) ac (rms) or dc	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/									
			At +25°C									
			14 kHz	20 kHz	50 kHz	150 kHz	300 kHz	600 kHz	1 MHz	10 MHz	100 MHz	1 GHz
0066	T	30.0	---	---	---	25	35	45	50	70	70	70
0067	"	30.0	15	18	28	37	45	53	58	"	"	"
0068	"	50.0	---	---	---	25	35	45	50	"	"	"
0069	"	50.0	15	18	28	37	43	50	58	"	"	"

1/ Full-load insertion loss measurements shall be performed over the frequency range of 100 kHz to 20 MHz inclusive. Measurements below or above this frequency range shall be performed at no-load.

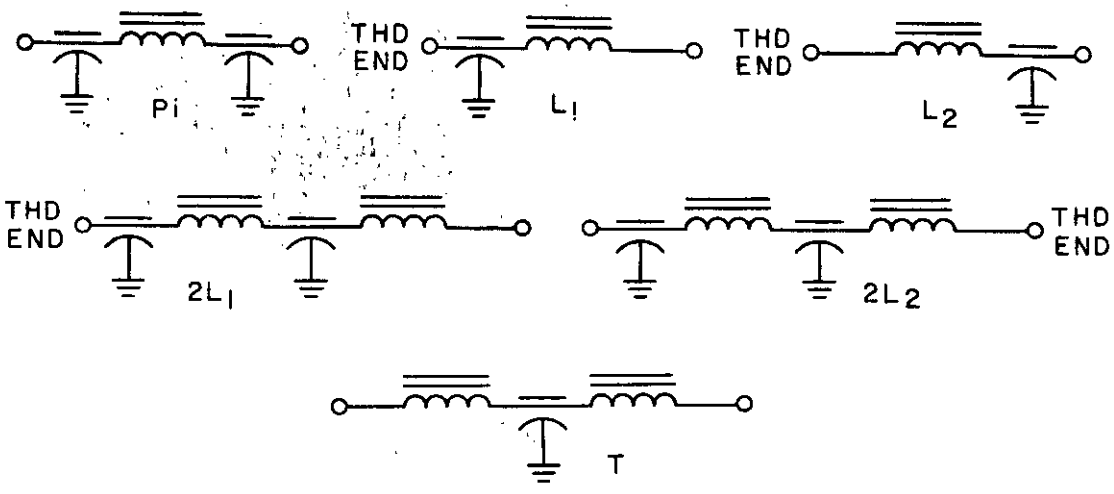
FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED, STYLE FL54



CONFIGURATION 1



CONFIGURATION 2



CIRCUIT DIAGRAMS

FIGURE 101-3. Case dimensions and circuit diagram.

Dash number	Configuration	Dimensions									
		A		B	C	D	E		F	Mounting thread	Terminal thread
		Min	Max	Max	Max	Max	Min	Max	Max		
0001	1	1.32 (33.5)	1.44 (36.6)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)	.250-28 UNF-2A	NA
0002	1	1.32 (33.5)	1.44 (36.6)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)	.250-28 UNF-2A	NA
0003	1	1.75 (44.5)	1.87 (47.5)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0004	1	1.75 (44.5)	1.87 (47.5)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0005	1	1.57 (39.88)	1.69 (42.93)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)	.250-28 UNF-2A	NA
0006	1	1.57 (39.88)	1.69 (42.93)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)	.250-28 UNF-2A	NA
0007	1	1.63 (41.4)	1.75 (44.5)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0008	1	1.63 (41.4)	1.75 (44.5)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0009	1	1.88 (47.8)	2.00 (50.8)	.77 (19.6)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	.3125-24 UNF-2A	NA
0010	1	1.88 (47.8)	2.00 (50.8)	.77 (19.6)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	.3125-24 UNF-2A	NA
0011	1	2.75 (69.9)	2.87 (72.90)	1.27 (32.3)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0012	1	2.75 (69.9)	2.87 (72.90)	1.27 (32.3)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0013	1	2.00 (50.8)	2.12 (53.9)	1.15 (29.3)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0014	1	2.00 (50.8)	2.12 (53.9)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0015	2	2.54 (64.5)	2.68 (68.1)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0016	2	2.54 (64.5)	2.68 (68.1)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0017	1	2.44 (62.0)	2.56 (65.0)	.77 (19.6)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	.3125-24 UNF-2A	NA
0018	1	2.44 (62.0)	2.56 (65.0)	.77 (19.6)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	.3125-24 UNF-2A	NA
0019	1	2.56 (65.0)	2.68 (68.1)	.77 (19.6)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	.3125-24 UNF-2A	NA
0020	1	2.56 (65.0)	2.68 (68.1)	.77 (19.6)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	.3125-24 UNF-2A	NA
0021	1	2.81 (71.4)	2.93 (74.4)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA

FIGURE 101-3. Case dimensions and circuit diagrams.

Dash number	Configurations	Dimensions									
		A		B	C	D	E		F	Mounting thread	Terminal thread
		Min	Max	Max	Max	Max	Min	Max	Max		
0022	1	2.81 (71.4)	2.93 (74.4)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0023	1	3.06 (77.7)	3.18 (80.8)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0024	1	3.06 (77.7)	3.18 (80.8)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0025	2	4.19 (106.4)	4.31 (109.5)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0026	2	4.19 (106.4)	4.31 (109.5)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0027	2	4.81 (122.2)	4.93 (125.2)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0028	2	4.81 (122.2)	4.93 (125.2)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0029	2	4.94 (125.5)	5.06 (128.5)	2.27 (57.7)	1.075 (27.31)	.810 (20.57)	.540 (13.72)	.580 (14.73)	.810 (20.57)	1.125-18 UNEF-2A	.190-32 UNF-2A
0030	2	4.94 (125.5)	5.06 (128.5)	2.27 (57.7)	1.075 (27.31)	.810 (20.57)	.540 (13.72)	.580 (14.73)	.810 (20.57)	1.125-18 UNEF-2A	.190-32 UNF-2A
0031	2	5.94 (150.9)	6.06 (153.9)	2.27 (57.7)	1.075 (27.31	.880 (22.35)	.540 (13.72)	.580 (14.73)	.880 (22.35)	1.125-18 UNEF-2A	.250-20 UNC-2A
0032	2	5.94 (150.9)	6.06 (153.9)	2.27 (57.7)	1.075 (27.31)	.880 (22.35)	.540 (13.72)	.580 (14.73)	.880 (22.35)	1.125-18 UNEF-2A	.250-20 UNC-2A
0033	1	1.88 (47.8)	2.00 (50.8)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)	.250-28 UNF-2A	NA
0034	1	2.07 (52.6)	2.19 (55.6)	.77 (19.6)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	.3125-24 UNF-2A	NA
0035	1	2.19 (55.6)	2.31 (58.7)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0036	1	1.88 (47.8)	2.00 (50.8)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)	.250-28 UNF-2A	NA
0037	1	2.26 (57.4)	2.38 (60.5)	.77 (19.6)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	.3125-24 UNF-2A	NA
0038	1	2.44 (62.0)	2.56 (65.8)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0039	1	2.32 (58.9)	2.44 (62.0)	.77 (19.6)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	.3125-24 UNF-2A	NA
0040	1	2.32 (58.9)	2.44 (62.0)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0041	1	4.13 (104.9)	4.25 (108.0)	1.27 (32.3)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA

FIGURE 101-3. Case dimensions and circuit diagrams - Continued.

Dash number	Configuration	Dimensions									
		A		B	C	D	E		F	Mounting thread	Terminal thread
		Min	Max	Max	Max	Max	Min	Max	Max		
0042	1	2.19 (55.6)	2.31 (58.7)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0043	1	2.57 (65.3)	2.69 (68.3)	1.15 (29.3)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0044	2	3.82 (97.0)	3.94 (100.1)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0045	1	2.50 (63.6)	2.62 (66.5)	1.27 (32.3)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0046	2	3.44 (87.4)	3.56 (90.4)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0047	2	3.82 (97.0)	3.94 (100.1)	2.27 (57.7)	1.075 (27.31)	.690 (17.53)	.540 (13.72)	.580 (14.73)	.690 (17.53)	1.125-18 UNEF-2A	.164-32 UNC-2A
0048	2	3.19 (81.0)	3.31 (84.1)	1.27 (32.3)	.540 (13.72)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.625-24 UNEF-2A	.164-32 UNC-2A
0049	2	3.83 (97.3)	3.95 (100.3)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0050	2	3.94 (100.1)	4.06 (103.1)	2.27 (57.7)	1.075 (27.31)	.810 (20.57)	.540 (13.72)	.580 (14.73)	.810 (20.57)	1.125-18 UNEF-2A	.190-32 UNF-2A
0051	2	3.94 (100.1)	4.06 (103.1)	2.27 (57.7)	1.075 (27.31)	.810 (20.57)	.540 (13.72)	.580 (14.73)	.810 (20.57)	1.125-18 UNEF-2A	.190-32 UNF-2A
0052	2	3.94 (100.1)	4.06 (103.1)	2.27 (57.7)	1.075 (27.31)	.880 (20.57)	.540 (13.72)	.580 (14.73)	.880 (22.35)	1.125-18 UNEF-2A	.250-20 UNC-2A
0053	2	4.44 (112.8)	4.57 (116.1)	2.27 (57.7)	1.075 (27.31)	.880 (20.57)	.540 (13.72)	.580 (14.73)	.880 (22.35)	1.125-18 UNEF-2A	.250-20 UNC-2A
0054	1	1.88 (47.8)	2.00 (50.8)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)	.250-28 UNF-2A	NA
0055	1	2.19 (55.6)	2.31 (58.7)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0056	1	1.88 (47.8)	2.00 (50.8)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)	.250-28 UNF-2A	NA
0057	1	2.81 (71.4)	2.93 (74.4)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0058	1	2.32 (58.9)	2.44 (62.0)	.77 (19.6)	.260 (6.50)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	.3125-24 UNF-2A	NA
0059	1	4.13 (104.9)	4.25 (108.0)	1.27 (32.3)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0060	1	2.19 (55.6)	2.31 (58.7)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0061	2	3.82 (97.0)	3.94 (100.1)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A

FIGURE 101-3. Case dimensions and circuit diagrams - Continued.

Dash number	Config-uration	Dimensions									
		A		B	C	D	E		F	Mounting thread	Terminal thread
		Min	Max	Max	Max	Max	Min	Max	Max		
0062	1	2.69 (68.3)	2.81 (71.4)	1.27 (32.3)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0063	2	3.82 (97.0)	3.94 (71.4)	1.77 (45.0)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0064	2	3.19 (81.0)	3.31 (84.1)	1.27 (32.3)	.540 (13.72)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.625-24 UNEF-2A	.164-32 UNC-2A
0065	2	3.94 (100.1)	4.06 (103.1)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0066	2	4.44 (112.8)	4.56 (115.8)	2.27 (57.7)	1.075 (27.3)	.810 (20.57)	.540 (13.72)	.580 (14.73)	.810 (20.57)	1.125-18 UNEF-2A	.190-32 UNF-2A
0067	2	4.69 (119.1)	4.81 (122.2)	2.27 (57.7)	1.075 (27.3)	.810 (20.57)	.540 (13.72)	.580 (14.73)	.810 (20.57)	1.125-18 UNEF-2A	.190-32 UNF-2A
0068	2	4.44 (112.8)	4.56 (115.8)	2.27 (57.7)	1.075 (27.3)	.880 (22.35)	.540 (13.72)	.580 (14.73)	.880 (22.35)	1.125-18 UNEF-2A	.250-20 UNC-2A
0069	2	5.44 (138.2)	5.56 (141.2)	2.27 (57.7)	1.075 (27.3)	.880 (22.35	.540 (13.72)	.580 (14.73)	.880 (22.35)	1.125-18 UNEF-2A	.250-20 UNC-2A

FIGURE 101-3. Case dimensions and circuit diagrams - Continued.

NOTES:
1. Dimensions are in inches, metric equivalents are in parentheses and are given for general information only.
2. Circuit diagram is for information only.
3. Mounting hardware shall be supplied with filter.
4. Terminal identification (non-symmetrical filters): The case shall be marked at the threaded end of the filter, with the symbol "C" or the symbol "L" as follows:

Circuit	Symbol
L_1	C
L_2	L
$2L_1$	C
$2L_2$	L

5. Angle or bend of terminals for configuration 1 is optional.
6. Solderability is not applicable to configuration 2.
7. Terminal hole dimensions shall be as follows:

Dash number	Terminal hole/slot
-0001,-0002,-0005,-0006, -0033,-0036,-0054,-0056,	.062 ±.015
-0009,-0010,-0017,-0018, -0019,-0020,-0034,-0037, -0039,-0058	.062 ±.015 x .125 ±.015
-0003,-0004,-0007,-0008, -0011,-0012,-0013,-0014, -0021,-0022,-0023,-0024, -0035,-0038,-0040,-0041, -0042,-0043,-0045,-0052, -0055,-0059,-0060,-0062,	.093 ±.015 x .187 ±.015

FIGURE 101-3. Case dimensions and circuit diagrams - Continued.

FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED,

STYLE FL55

Rated voltage: 400 V dc, 115 V ac from dc to 400 Hz.

Rated current: See table 101-IV.

Operating temperature range: -55°C to +125°C.

Temperature rise:

25°C maximum for parts rated up to and including 10 amperes.
35°C maximum for parts rated above 10 amperes.

Overload: 140 percent of rated current.

Maximum voltage drop: 1.15 volts ac (rms) and dc.

Insulation resistance:

At 25°C: 1,000 megohms minimum
At 125°C: 100 megohms minimum.

Insertion loss:

At 25°C:	Shall be as specified in table 101-IV
At -55°C and +125°C:	A degradation of 2 dB from the value specified in table 101-IV shall be allowed up to 10 MHz.

Part number: M15733/73- (dash number from table 101-IV).

TABLE 101-IV. Electrical characteristics (MIL-F-15733/73).

Dash number	Circuit diagrams	Rated current (amperes) ac (rms) or dc	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/									
			At +25°C									
			14 kHz	20 kHz	50 kHz	150 kHz	300 kHz	600 kHz	1 MHz	10 MHz	100 MHz	1 GHz
0001	L_1	.5	---	---	---	30	40	50	60	60	60	60
0002	L_2	"	---	---	---	30	40	50	"	"	"	"
0003	L_1	"	---	---	---	50	60	60	"	"	"	"
0004	L_2	"	---	---	---	50	60	60	"	"	"	"
0005	L_1	1.0	---	---	---	30	40	50	"	"	"	"
0006	L_2	"	---	---	---	30	40	50	"	"	"	"
0007	L_1	"	---	---	---	50	60	60	"	"	"	"
0008	L_2	"	---	---	---	50	60	60	"	"	"	"
0009	L_1	3.0	---	---	---	30	40	50	"	"	"	"
0010	L_2	"	---	---	---	30	40	50	"	"	"	"
0011	L_1	"	---	---	---	40	50	60	"	"	"	"
0012	L_2	"	---	---	---	40	50	60	"	"	"	"
0013	L_1	5.0	---	---	---	30	40	50	"	"	"	"
0014	L_2	"	---	---	---	30	40	50	"	"	"	"
0015	L_1	"	---	---	---	40	50	60	"	"	"	"
0016	L_2	"	---	---	---	40	50	60	"	"	"	"

See footnote at end of table.

TABLE 101-IV Electrical characteristics (MIL-F-15733/73) - Continued.

Dash number	Circuit diagrams	Rated current (amperes) ac (rms) or dc	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/									
			At +25°C									
			14 kHz	20 kHz	50 kHz	150 kHz	300 kHz	600 kHz	1 MHz	10 MHz	100 MHz	1 GHz
0017	$2L_1$	.5	---	10	40	75	80	80	80	80	80	80
0018	$2L_2$	.5	---	10	40	75	"	"	"	"	"	"
0019	$2L_1$	1.0	---	10	40	75	"	"	"	"	"	"
0020	$2L_2$	1.0	---	10	40	75	"	"	"	"	"	"
0021	$2L_1$	3.0	---	---	30	65	"	"	"	"	"	"
0022	$2L_2$	3.0	---	---	30	65	"	"	"	"	"	"
0023	$2L_1$	5.0	---	---	30	65	"	"	"	"	"	"
0024	$2L_2$	5.0	---	---	30	65	"	"	"	"	"	"
0025	$2L_1$	10.0	---	---	10	55	"	"	"	"	"	"
0026	$2L_2$	10.0	---	---	10	55	"	"	"	"	"	"
0027	$2L_1$	20.0	---	---	10	55	"	"	"	"	"	"
0028	$2L_2$	20.0	---	---	10	55	"	"	"	"	"	"
0029	$2L_1$	30.0	---	---	10	55	"	"	"	"	"	"
0030	$2L_2$	30.0	---	---	10	55	"	"	"	"	"	"
0031	$2L_1$	50.0	---	---	10	55	"	"	"	"	"	"
0032	$2L_2$	50.0	---	---	10	55	"	"	"	"	"	"

See footnote at end of table.

TABLE 101-IV Electrical characteristics (MIL-F-15733/73) - Continued.

Dash number	Circuit diagrams	Rated current (amperes) ac (rms) or dc	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/ At +25°C									
			14 kHz	20 kHz	50 kHz	150 kHz	300 kHz	600 kHz	1 MHz	10 MHz	100 MHz	1 GHz
0033	pi	.5	---	---	---	40	60	75	80	80	80	80
0034	"	.5	---	---	---	60	80	80	"	"	"	"
0035	"	.5	---	---	---	80	80	80	"	"	"	"
0036	"	1.0	---	---	---	40	60	75	"	"	"	"
0037	"	1.0	---	---	---	60	80	80	"	"	"	"
0038	"	1.0	---	---	---	80	80	80	"	"	"	"
0039	"	3.0	---	---	---	40	60	75	"	"	"	"
0040	"	3.0	---	---	---	60	80	80	"	"	"	"
0041	"	3.0	---	---	---	80	80	80	"	"	"	"
0042	"	5.0	---	---	---	40	60	75	"	"	"	"
0043	"	5.0	---	---	---	60	80	80	"	"	"	"
0044	"	5.0	---	---	---	80	80	80	"	"	"	"
0045	"	10.0	---	---	---	40	60	75	"	"	"	"
0046	"	10.0	---	---	---	60	80	80	"	"	"	"
0047	"	10.0	---	---	---	80	80	80	"	"	"	"
0048	"	20.0	---	---	---	40	50	75	"	"	"	"
0049	"	20.0	---	---	---	60	80	80	"	"	"	"

See footnote at end of table.

TABLE 101-IV Electrical characteristics (MIL-F-15733/73) - Continued.

Dash number	Circuit diagrams	Rated current (amperes) ac (rms) or dc	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/ At +25°C									
			14 kHz	20 kHz	50 kHz	150 kHz	300 kHz	600 kHz	1 MHz	10 MHz	100 MHz	1 GHz
0050	pi	30.0	---	---	---	40	60	75	80	80	80	80
0051	"	30.0	---	---	---	60	80	80	"	"	"	"
0052	"	50.0	---	---	---	40	60	75	"	"	"	"
0053	"	50.0	---	---	---	60	80	80	"	"	"	"
0054	T	.5	---	---	---	60	70	70	70	70	70	70
0055	"	.5	20	28	50	60	60	60	60	"	"	"
0056	"	1.0	---	---	---	35	50	60	70	"	"	"
0057	"	1.0	20	28	50	60	60	60	60	"	"	"
0058	"	3.0	---	---	---	25	40	50	"	"	"	"
0059	"	3.0	20	26	45	60	60	60	"	"	"	"
0060	"	5.0	---	---	---	25	35	45	"	"	"	"
0061	"	5.0	15	18	45	50	55	60	"	"	"	"
0062	"	10.0	---	---	---	25	35	45	50	"	"	"
0063	"	10.0	15	18	28	37	45	53	58	"	"	"
0064	"	20.0	---	---	---	25	35	45	50	"	"	"
0065	"	20.0	15	18	28	37	45	53	58	"	"	"

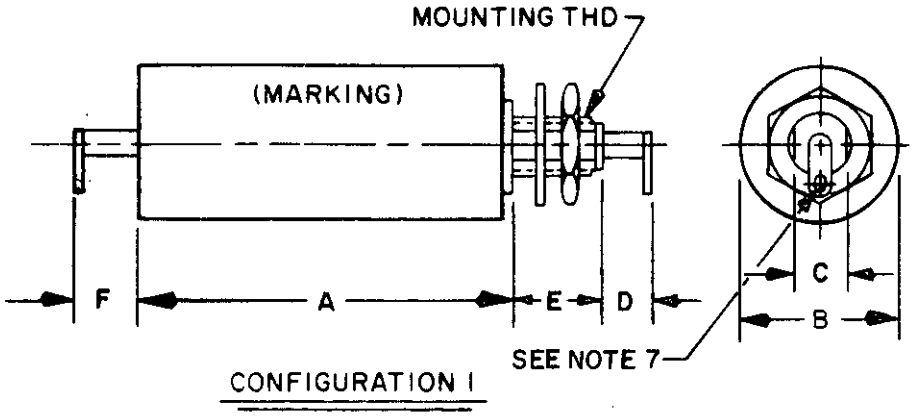
See footnote at end of table.

TABLE 101-IV Electrical characteristics (MIL-F-15733/73) - Continued.

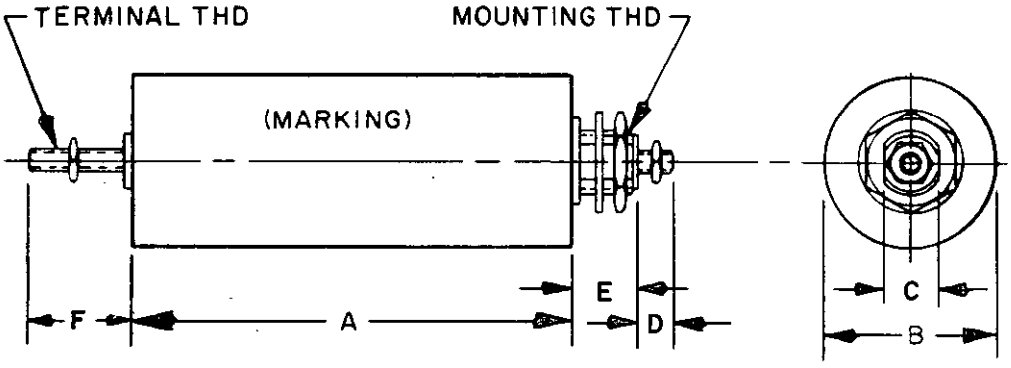
Dash number	Circuit diagrams	Rated current (amperes) ac (rms) or dc	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/ At +25°C									
			14 kHz	20 kHz	50 kHz	150 kHz	300 kHz	600 kHz	1 MHz	10 MHz	100 MHz	1 GHz
0066	T	30.0	---	---	---	25	35	45	50	70	70	70
0067	"	30.0	15	18	28	37	45	53	58	"	"	"
0068	"	50.0	---	---	---	25	35	45	50	"	"	"
0069	"	50.0	15	18	28	37	43	50	58	"	"	"

1/ Full-load insertion loss measurements shall be performed over the frequency range of 100 kHz to 20 MHz inclusive. Measurements below or above this frequency shall be performed at no-load.

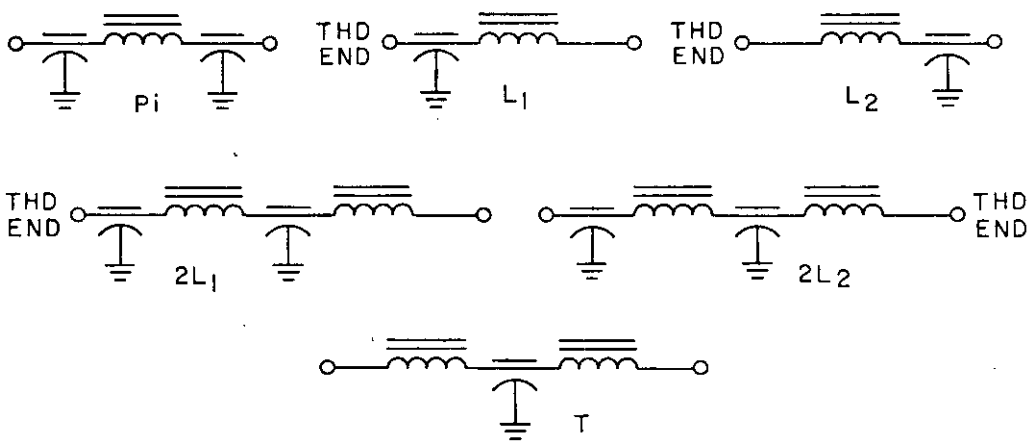
FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED, STYLE FL55,



CONFIGURATION I



CONFIGURATION 2



CIRCUIT DIAGRAMS

FIGURE 101-4. Case dimensions and circuit diagrams.

Dash number	Configurations	Dimensions									Mounting thread	Terminal thread
		A		B	C	D	E		F			
		Min	Max	Max	Max	Max	Min	Max	Max			
0001	1	1.63 (41.4)	1.75 (44.5)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)		.250-28 UNF-2A	NA
0002	1	1.63 (41.4)	1.75 (44.5)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)		.250-28 UNF-2A	NA
0003	1	1.94 (49.3)	2.06 (52.3)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)		.4375-20 UNF-2A	NA
0004	1	1.94 (49.3)	2.06 (52.3)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)		.4375-20 UNF-2A	NA
0005	1	1.88 (47.8)	2.00 (50.8)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)		.250-28 UNF-2A	NA
0006	1	1.88 (47.8)	2.00 (50.8)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)		.250-28 UNF-2A	NA
0007	1	2.07 (52.6	2.19 (55.6)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)		.4375-20 UNF-2A	NA
0008	1	2.07 (52.6)	2.19 (55.6)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)		.4375-20 UNF-2A	NA
0009	1	2.13 (54.1)	2.25 (57.2)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)		.4375-20 UNF-2A	NA
0010	1	2.13 (54.1)	2.25 (57.2)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)		.4375-20 UNF-2A	NA
0011	2	2.25 (57.2)	2.37 (60.2)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)		.750-20 UNEF-2A	.164-32 UNC-2A
0012	2	2.25 (57.2)	2.37 (60.2)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)		.750-20 UNEF-2A	.164-32 UNC-2A
0013	1	2.63 (66.8)	2.75 (69.9)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)		.4375-20 UNF-2A	NA
0014	1	2.63 (66.8)	2.75 (69.9)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)		.4375-20 UNF-2A	NA
0015	2	3.07 (78.0)	3.19 (81.0)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)		.750-20 UNEF-2A	.164-32 UNC-2A

FIGURE 101-4. Case dimensions and circuit diagrams - Continued.

Dash number	Configurations	Dimensions								Mounting thread	Terminal thread
		A		B	C	D	E		F		
		Min	Max	Max	Max	Max	Min	Max	Max		
0016	2	3.07 (78.0)	3.19 (81.0)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0017	1	3.06 (77.7)	3.18 (80.8)	.77 (19.6)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	.3125-24 UNF-2A	NA
0018	1	3.06 (77.7)	3.18 (80.8)	.77 (19.6)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	.3125-24 UNF-2A	NA
0019	1	3.19 (81.0)	3.31 (84.1)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0020	1	3.19 (81.0)	3.31 (84.1)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0021	1	3.44 (87.4)	3.56 (90.4)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0022	1	3.44 (87.4)	3.56 (90.4)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0023	1	4.44 (112.8)	4.56 (115.8)	1.27 (32.3)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0024	1	4.44 (112.8)	4.56 (115.8)	1.27 (32.3)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0025	2	4.44 (112.8)	4.56 (115.8)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-52 UNC-2A
0026	2	4.44 (112.8)	4.56 (115.8)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0027	2	5.44 (138.2)	5.56 (141.2)	1.77 (45.0)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0028	2	5.44 (138.2)	5.56 (141.2)	1.77 (45.0)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0029	2	5.56 (141.2)	5.68 (144.3)	2.27 (57.7)	1.075 (27.31)	.810 (20.57)	.540 (13.72)	.580 (14.73)	.810 (20.57)	1.125-18 UNEF-2A	.190-32 UNF-2A
0030	2	5.56 (141.2)	5.68 (144.3)	2.27 (57.7)	1.075 (27.31)	.810 (20.57)	.540 (13.72)	.580 (14.73)	.810 (20.57)	1.125-18 UNEF-2A	.190-32 UNF-2A

FIGURE 101-4. Case dimensions and circuit diagrams - Continued.

Dash number	Configurations	Dimensions								Mounting thread	Terminal thread
		A		B	C	D	E		F		
		Min	Max	Max	Max	Max	Min	Max	Max		
0031	2	6.44 (163.6)	6.56 (166.6)	2.27 (57.7)	1.075 (27.31)	.880 (22.35)	.540 (13.72)	.580 (14.73)	.880 (22.35)	1.125-18 UNEF-2A	.250-20 UNC-2A
0032	2	6.44 (163.6)	6.56 (166.6)	2.27 (57.7)	1.075 (27.31)	.880 (22.35)	.540 (13.72)	.580 (14.73)	.880 (22.35)	1.125-18 UNEF-2A	.250-20 UNC-2A
0033	1	2.26 (57.4)	2.38 (60.5)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)	.250-28 UNF-2A,	NA
0034	1	2.69 (68.3)	2.81 (71.4)	.77 (19.6)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	.3125-24 UNF-2A	NA
0035	1	2.94 (74.7)	3.06 (77.7)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0036	1	2.26 (57.4)	2.38 (60.5)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)	.250-28 UNF-2A	NA
0037	1	2.32 (58.9)	2.44 (62.0)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0038	1	3.26 (82.8)	3.38 (85.9)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0039	1	2.50 (63.5)	2.62 (66.6)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0040	1	2.94 (74.7)	3.06 (77.7)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0041	2	3.69 (93.7)	3.81 (96.7)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0042	1	2.82 (71.6)	2.94 (74.7)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0043	1	4.07 (103.4)	4.19 (106.4)	1.27 (32.3)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0044	2	4.32 (109.7)	4.44 (112.8)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0045	1	3.19 (81.0)	3.31 (84.1)	1.27 (32.3)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA

FIGURE 101-4. Case dimensions and circuit diagrams - Continued.

Dash number	Config-urations	Dimensions								Mounting thread	Terminal thread
		A		B	C	D	E		F		
		Min	Max	Max	Max	Max	Min	Max	Max		
0046	2	4.14 (105.2)	4.26 (108.2)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0047	2	5.19 (131.8)	5.31 (134.9)	2.27 (57.7)	1.075 (27.31)	.690 (17.53)	.540 (13.72)	.580 (14.73)	.690 (17.53)	1.125-18 UNEF-2A	.164-32 UNC-2A
0048	2	3.57 (90.7)	3.69 (93.7)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0049	2	4.94 (125.5)	5.06 (128.5)	1.77 (45.0)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0050	2	3.94 (100.1)	4.06 (103.1)	2.27 (57.7)	1.075 (27.31)	.810 (20.57)	.540 (13.72)	.580 (14.73)	.810 (20.57)	1.125-18 UNEF-2A	.190-32 UNF-2A
0051	2	4.83 (122.7)	4.95 (125.7)	2.27 (57.7)	1.075 (27.31)	.810 (20.57)	.540 (13.72)	.580 (14.73)	.810 (20.57)	1.125-18 UNEF-2A	.190-30 UNF-2A
0052	2	3.94 (100.1)	4.06 (103.1)	2.27 (57.7)	1.075 (27.31)	.880 (22.35)	.540 (13.72)	.580 (14.73)	.880 (22.35)	1.125-18 UNEF-2A	.250-20 UNC-2A
0053	2	5.69 (144.5)	5.81 (147.6)	2.27 (57.7)	1.075 (27.31)	.880 (22.35	.540 (13.72)	.580 (14.73)	.880 (22.35)	1.125-18 UNEF-2A	.250-20 UNC-2A
0054	1	2.26 (57.4)	2.38 (60.5)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)	.250-28 UNF-2A	NA
0055	1	2.94 (74.7)	3.06 (77.7)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0056	1	2.26 (57.4)	2.38 (60.5)	.69 (17.5)	.211 (5.36)	.190 (4.83)	.230 (5.84)	.270 (6.86)	.190 (4.83)	.250-25 UNF-2A	NA
0057	1	3.81 (96.8)	3.93 (99.8)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0058	1	2.50 (63.5)	2.62 (66.6)	1.02 (25.9)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0059	2	3.69 (93.7)	3.81 (96.7)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0060	1	2.82 (71.6)	2.94 (74.7)	1.15 (29.2)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA

FIGURE 101-4. Case dimensions and circuit diagrams - Continued.

Dash number	Configurations	Dimensions									
		A		B	C	D	E		F	Mounting thread	Terminal thread
		Min	Max	Max	Max	Max	Min	Max	Max		
0061	2	4.32 (109.7)	4.44 (112.8)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0062	1	3.19 (81.0)	3.31 (84.1)	1.27 (32.3)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	.4375-20 UNF-2A	NA
0063	2	4.94 (125.5)	5.06 (128.5)	1.77 (45.0)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0064	2	3.57 (90.7)	3.69 (93.7)	1.52 (38.6)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0065	2	4.94 (125.5)	5.06 (128.5)	1.77 (45.0)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.750-20 UNEF-2A	.164-32 UNC-2A
0066	2	4.44 (112.8)	4.56 (115.8)	2.27 (57.7)	1.075 (27.31)	.810 (20.57)	.540 (13.72)	.580 (14.73)	.810 (20.57)	1.125-18 UNEF-2A	.190-32 UNF-2A
0067	2	5.44 (138.2)	5.56 (141.2)	2.27 (57.7)	1.075 (27.31)	.810 (20.57)	.540 (13.72)	.580 (14.73)	.810 (20.57)	1.125-18 UNEF-2A	.190-32 UNF-2A
0068	2	4.69 (119.1)	4.81 (122.2)	2.27 (57.7)	1.075 (27.31)	.880 (22.35)	.540 (13.72)	.580 (14.73)	.880 (22.35)	1.125-18 UNEF-2A	.250-20 UNC-2A
0069	2	6.44 (163.6)	6.56 (166.6)	2.27 (57.7)	1.075 (27.31)	.880 (22.35)	.540 (13.72)	.580 (14.73)	.880 (22.35)	1.125-18 UNEF-2A	.250-20 UNC-2A

NOTES:
1. Dimensions are in inches, metric equivalents are in parentheses and are given for general information only.
2. Circuit diagram is for information only.
3. Mounting hardware shall be supplied with filter.
4. Terminal identification (non-symmetrical filters): The case shall be marked at the threaded end of the filter, with the symbol "C" or the symbol "L" as follows:

Circuit	Symbol
L_1	C
L_2	L
$2L_1$	C
$2L_2$	L

5. Angle or bend of terminals for configuration 1 is optional.
6. Solderability is not applicable to configuration 2.
7. Terminal hole dimensions shall be as follows:

Dash number	Terminal hole/slot
-0001,-0002,-0005,-0006, -0033,-0036,-0054,-0056,	.062 ±.015
-0017,-0018,-0034,	.062 ±.015 x .125 ±.015
-0003,-0004,-0007,-0008, -0009,-0010,-0013,-0014, -0019,-0020,-0021,-0022, -0023,-0024,-0035,-0037, -0038,-0039,-0040,-0042, -0043,-0045,-0055,-0057, -0058,-0060,-0062	.093 ±.015 x .187 ±.015

FIGURE 101-4. Case dimensions and circuit diagrams - Continued.

FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED,
STYLE FL98

Rated voltage: 400 V dc, 115 V ac from dc to 400 Hz.

Rated current: See table 101-V.

Operating temperature range: -55°C to +85°C.

Temperature rise: 25°C, maximum for filters rated at 10 amperes or less.
35°C, maximum for filters rated above 10 amperes.

Overload: 140 percent of rated voltage.

Voltage drop: 1.15 volts maximum for each circuit.

Insertion loss: For each circuit see table 101-V.

Part number: M15733/75- (dash number from table 101-V).

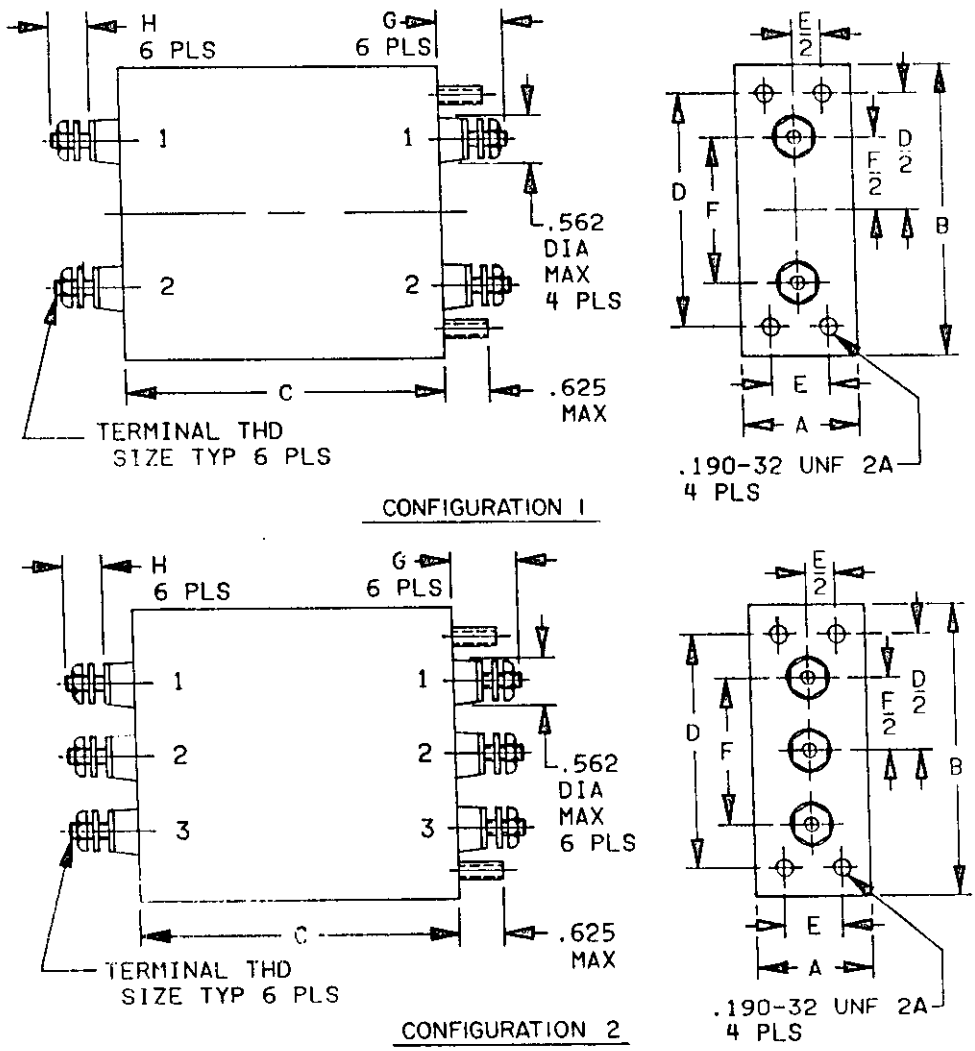
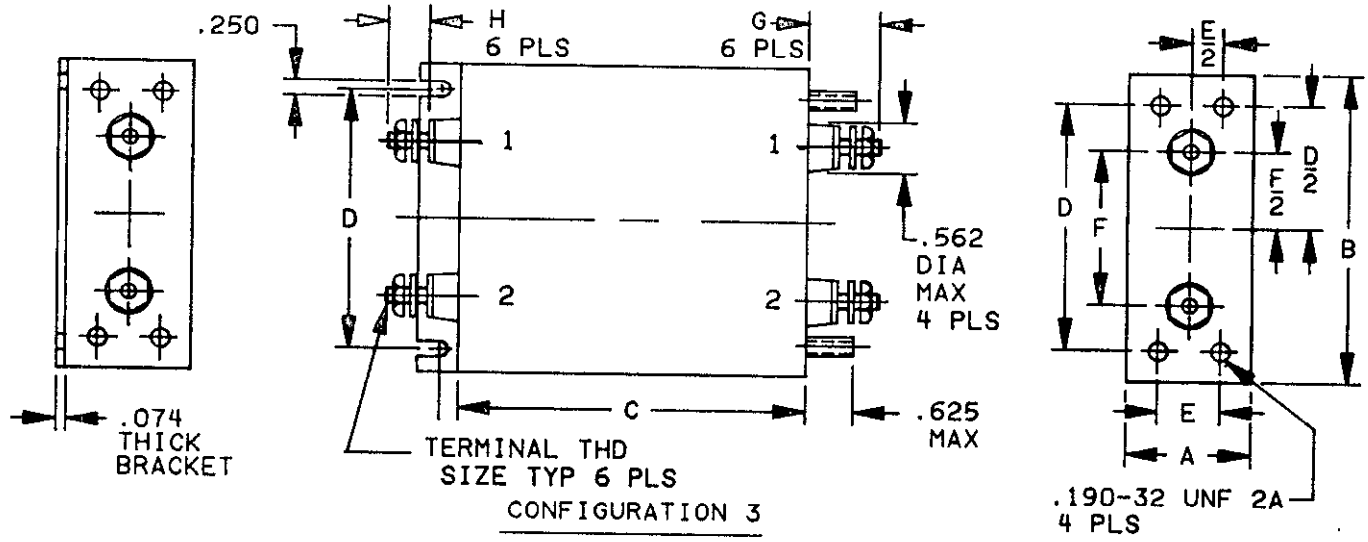


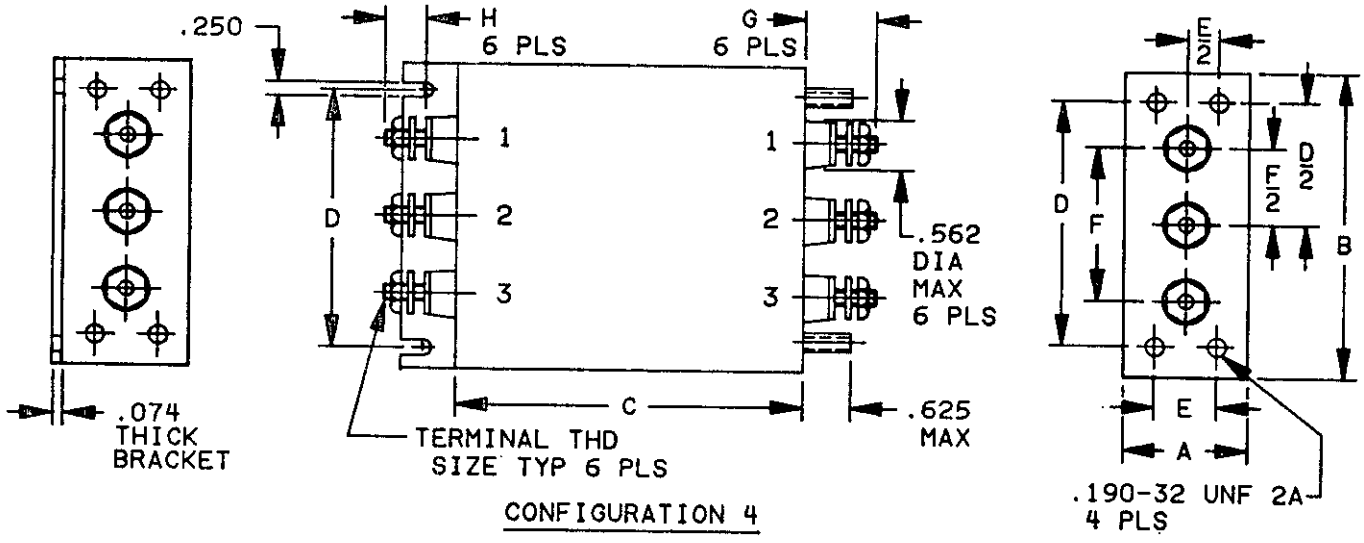
FIGURE 101-5. Case dimensions, configuration, and circuit diagram - Continued.

FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED,

STYLE FL98



CONFIGURATION 3

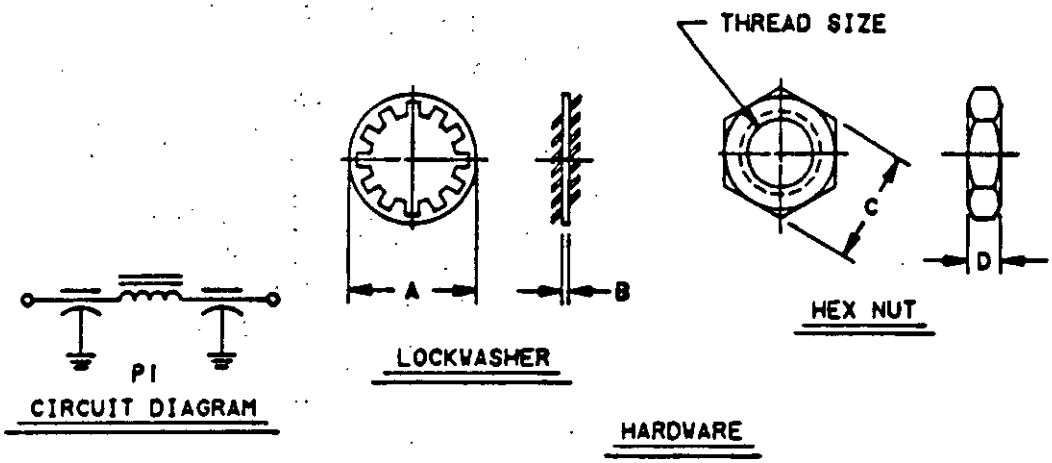


CONFIGURATION 4

FIGURE 101-5. Case dimensions, configuration, and circuit diagram - Continued.

FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED,

STYLE FL98



Mounting Hardware				
A ±.005	B ±.005	C ±.010	D ±.005	Thread size
.375 (9.53)	.022 (.56)	.375 (9.53)	.125 (3.18)	.190-32 UNF-2B
Terminal Hardware				
.330 (8.38)	.02 (.5)	.344 (8.74)	.125 (3.18)	.164-32 UNC-2B
.375 (9.53)	.022 (.56)	.375 (9.53)	.125 (3.18)	.190-32 UNF-2B
.472 (11.99)	.025 (.64)	.437 (11.10)	.156 (3.96)	.250-20 UNC-2B

Inches	mm
.074	1.88
.190	4.83
.25	6.4
.375	9.53
.562	14.27
.625	15.88

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Metric equivalents are in parentheses.
4. Circuit diagram is for information only.
5. Mounting hardware shall be supplied with filter.
6. Terminal hardware shall be supplied with filter.
7. Recommended mounting torque 192 oz-in maximum.
8. Recommended terminal torque as follows:

Thread	Torque
.164-32 UNC-2A	64 oz-in max.
.190-32 UNF-2A	96 oz-in max.
.250-20 UNC-2A	192 oz-in max.

9. Unless otherwise specified, tolerance is ±.031 (0.79 mm).
10. Marking shall include the numbers shown next to the terminals in all configurations.

FIGURE 101-5. Case dimensions, configuration, and circuit diagram - Continued.

Dash number	A ±.03	B ±.03	C ±.03	D ±.020	E ±.015	F ±.03	G Maximum	H Minimum	Terminal thread	Configuration number	Weight pounds max. (kg)
0001	1.13 (28.7)	2.25 (57.2)	3.58 (90.9)	1.750 (44.45)	.625 (15.88)	.75 (19.05)	.69 (17.5)	.290 (7.37)	.164-32 UNC-2A	1	.93 (0.42)
0002	1.50 (38.1)	3.00 (76.2)	4.94 (125.5)	2.500 (63.5)	1.000 (25.4)	1.50 (38.1)	"	"	"	1	1.79 (0.81)
0003	1.25 (31.8)	2.50 (63.5)	4.71 (119.6)	2.000 (50.8)	0.750 (19.05)	1.25 (31.8)	"	"	"	1	1.17 (0.53)
0004	1.50 (38.1)	3.00 (76.2)	5.57 (141.5)	2.500 (6.35)	1.000 (25.4)	1.50 (38.1)	"	"	"	1	2.07 (0.94)
0005	1.50 (38.1)	3.00 (76.2)	5.37 (136.4)	2.500 (6.35)	1.000 (25.4)	1.50 (38.1)	"	"	"	1	2.15 (0.98)
0006	2.25 (57.2)	4.50 (114.3)	6.44 (163.6)	4.000 (101.6)	1.125 (28.58)	2.25 (57.2)	"	"	"	3	4.38 (1.99)
0007	1.75 (44.5)	3.50 (88.9)	6.19 (157.2)	3.000 (76.2)	1.250 (31.75)	1.75 (44.5)	"	"	"	3	2.88 (1.31)
0008	2.25 (57.2)	4.50 (114.3)	6.08 (154.4)	4.000 (101.6)	1.750 (44.45)	2.25 (57.2)	"	"	.190-32 UNF-2A	3	4.41 (2.00)
0009	2.25 (57.2)	4.50 (114.3)	6.94 (176.3)	4.000 (101.6)	1.750 (44.45)	2.25 (57.2)	1.25 (31.8)	.600 (15.2)	.250-20 UNC-2A	3	5.24 (2.38)
0010	1.13 (28.7)	3.38 (85.9)	3.58 (90.9)	2.875 (73.03)	.625 (15.88)	2.00 (50.8)	.69 (17.5)	.290 (7.37)	.164-32 UNC-2A	2	1.28 (0.58)
0011	1.50 (38.1)	4.50 (114.3)	4.94 (125.5)	4.000 (101.6)	1.000 (25.4)	3.00 (76.2)	"	"	"	2	2.67 (1.21)
0012	1.25 (31.8)	3.75 (95.3)	4.71 (119.6)	3.250 (82.55)	.750 (19.05)	2.50 (63.5)	"	"	"	2	1.91 (0.87)
0013	1.50 (38.1)	4.50 (114.3)	5.57 (141.5)	4.000 (101.6)	1.000 (25.4)	3.00 (76.2)	"	"	"	2	3.1 (1.4)
0014	1.50 (38.1)	4.50 (114.3)	5.37 (136.4)	4.000 (101.6)	1.000 (25.4)	3.00 (76.2)	"	"	"	2	2.82 (1.3)
0015	2.25 (57.2)	6.57 (166.9)	6.44 (163.6)	6.250 (158.75)	1.750 (44.45)	4.50 (114.3)	"	"	"	4	6.82 (3.1)
0016	1.75 (44.5)	5.25 (133.6)	6.19 (157.2)	4.750 (120.65)	1.250 (31.75)	3.50 (88.9)	"	"	"	4	4.29 (1.9)
0017	2.25 (57.2)	6.75 (171.5)	6.08 (154.4)	6.250 (158.75)	1.754 (44.45)	4.50 (114.3)	"	"	.190-32 UNF-2A	4	6.62 (3.0)
0018	2.25 (57.2)	6.75 (171.5)	6.94 (176.3)	6.250 (158.75)	1.750 (44.45)	4.50 (114.3)	1.25 (31.8)	.600 (15.2)	.250-20 UNC-2A	4	6.87 (3.1)

FIGURE 101-5. Case dimensions, configuration, and circuit diagram - Continued.

FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED,

STYLE FL98

TABLE 101-V. Electrical characteristics (MIL-F-15733/75).

Dash number	Number of circuits	Rated current (amperes) (each circuit)	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/ (each circuit)								
			At +25°C								
			150 kHz	300 kHz	500 kHz	1 MHz	10 MHz	50 MHz	100 MHz	1 GHz	10 GHz
0001	2	3	60	80	80	80	80	80	80	80	80
0002	"	3	80	"	"	"	"	"	"	"	"
0003	"	5	60	"	"	"	"	"	"	"	"
0004	"	5	80	"	"	"	"	"	"	"	"
0005	"	10	60	"	"	"	"	"	"	"	"
0006	"	10	80	"	"	"	"	"	"	"	"
0007	"	20	60	"	"	"	"	"	"	"	"
0008	"	30	60	"	"	"	"	"	"	"	"
0009	"	50	60	"	"	"	"	"	"	"	"
0010	3	3	60	"	"	"	"	"	"	"	"
0011	"	3	80	"	"	"	"	"	"	"	"
0012	"	5	60	"	"	"	"	"	"	"	"
0013	"	5	80	"	"	"	"	"	"	"	"
0014	"	10	60	"	"	"	"	"	"	"	"
0015	"	10	80	"	"	"	"	"	"	"	"
0016	"	20	60	"	"	"	"	"	"	"	"
0017	"	30	60	"	"	"	"	"	"	"	"
0018	"	50	60	"	"	"	"	"	"	"	"

1/ Full-load insertion loss measurements shall be performed over the frequency range of 150 kHz to 10 MHz, inclusive. Measurements below or above this frequency range shall be performed at no-load.

SECTION 102

FILTERS, RADIO FREQUENCY INTERFERENCE

HIGH FREQUENCY TYPES

FILTERS, RADIO FREQUENCY INTERFERENCE

STYLE FL38

Rated voltage: 125 V dc or 90 V rms to 400 Hz.

Rated current: 10 amperes (dc or rms).

Operating temperature range: -55°C to +125°C.

Capacitance to ground: 1,750 pF.

Temperature rise: 25°C maximum.

Overload: 140 percent of rated current for 15 minutes.

Insertion loss: See table 102-I.

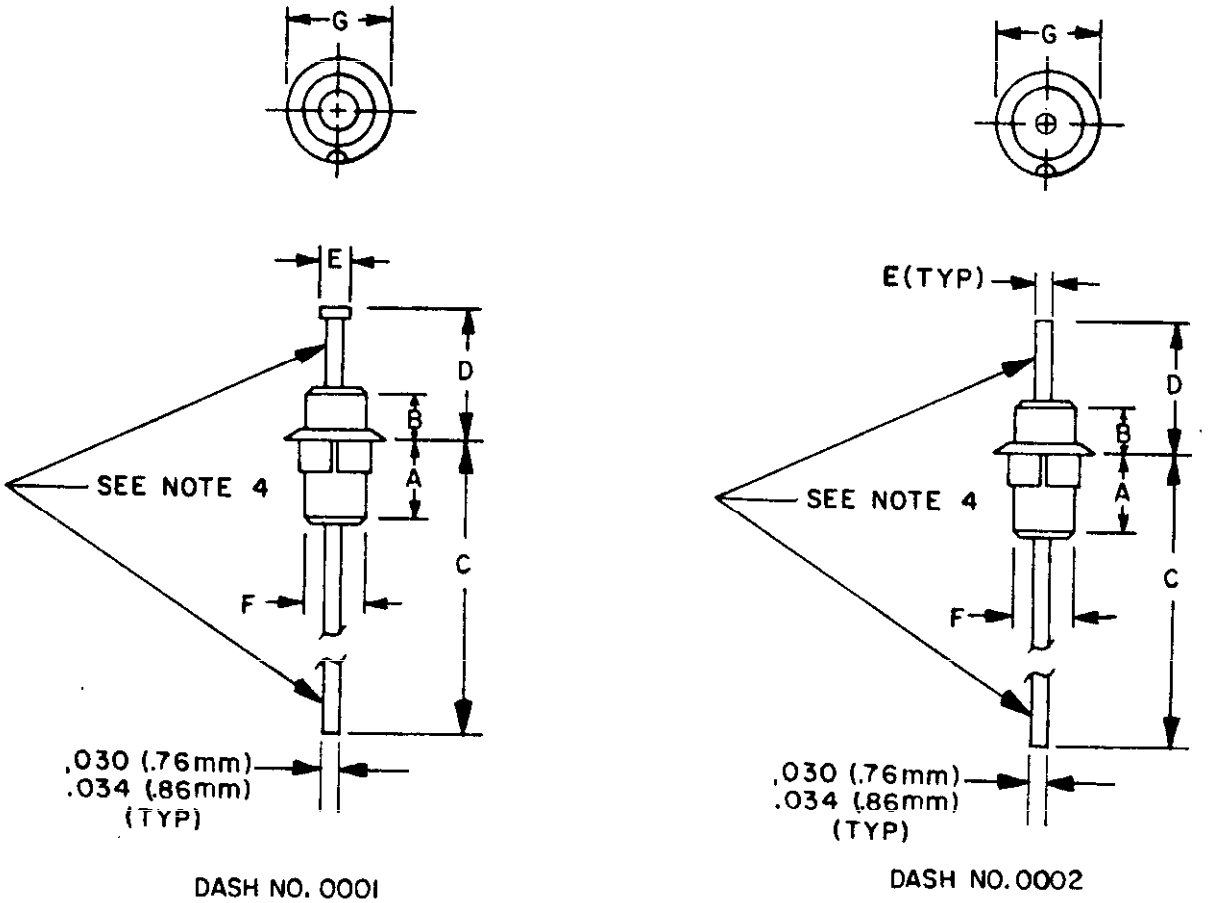
Part number: M15733/33- (dash number from table 102-I).

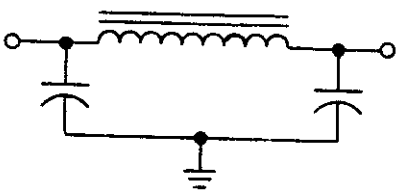
TABLE 102-I. Insertion loss versus frequency (M15733/33).

Dash number	Minimum no load insertion loss (dB) in accordance with MIL-STD-220 at +25°C				
	50 MHz	100 MHz	200 MHz	500 MHz	1-10 GHz
0001	35	50	50	60	60
0002	35	50	50	60	60

FILTERS, RADIO FREQUENCY INTERFERENCE

STYLE FL38





TYPICAL CIRCUIT DIAGRAM

FIGURE 102-1. Case dimensions and circuit configuration.

Dimensions

Dash number	A		B		C		D		E		F	G	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Max	Min	Max
0001	.142 (3.61)	.172 (4.37)	.078 (1.98)	.108 (2.74)	.749 (19.02)	.811 (20.60)	.273 (6.93)	.303 (7.70)	.045 (1.14)	.075 (1.90)	.125 (3.18)	.175 (4.44)	.205 (5.21)
0002	.142 (3.61)	.172 (4.37)	.078 (1.98)	.108 (2.74)	.749 (19.02)	.811 (20.60)	.273 (6.93)	.303 (7.70)	.030 (.76)	.034 (.86)	.125 (3.18)	.175 (4.44)	.205 (5.21)

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Circuit diagram for information only.
4. Leads shall be solid, tinned, AWG 20 (.032).
5. Suggested mounting hole diameter, .160, (4.06).

FIGURE 102-1. Case dimensions and circuit configuration - Continued.

FILTERS, RADIO FREQUENCY INTERFERENCE

STYLES FL30, FL32, FL34, AND FL43

Rated voltage: See table 102-II.

Rated current: See table 102-II.

Operating temperature range:

Dash number	
0002, 0003, 0006 to 0009, 0011, 0013, 0014	-55°C to +125°C
0012	-65°C to +85°C

Capacitance to ground: See table 102-II.

Temperature rise: 25°C maximum for dash numbers 0002, 0003, 0006 to 0009, 0011 to 0013 and 40°C maximum for dash number 0014.

Insertion loss: See table 102-II.

Voltage conditioning: 168 hours at 1.4 times rated dc.

Part number: M15733/61- (dash number from table 102-II).

TABLE 102-II. Electrical characteristics (M15733/61).

Dash number	Circuit	Rated voltage		Rated current (amperes)	Capacitance (min) pF	Voltage drop volts	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/																			
							At +25°C										At -55°C and +125°C									
		V dc	3/ V rms				1 MHz	5 MHz	10 MHz	20 MHz	50 MHz	100 MHz	200 MHz	500 MHz	1 GHz	10 GHz	1 MHz	5 MHz	10 MHz	20 MHz	50 MHz	100 MHz	200 MHz	500 MHz	1 GHz	10 GHz
0002	pi	200	140	10	1,500	.1	---	---	---	---	32	45	58	70	70	70	---	---	---	---	15	28	46	70	70	70
0003	"	500	350	25	2,000	.5	---	---	---	---	40	55	65	"	"	"	---	---	---	---	25	40	59	"	"	"
0006	"	200	140	10	1,500	.1	---	---	---	---	32	45	58	"	"	"	---	---	---	---	16	30	48	"	"	"
0007	"	100	70	"	5,000	"	---	---	---	---	50	65	70	"	"	"	---	---	---	---	"	"	"	"	"	"
0008	"	100	70	"	1,000	"	---	---	---	---	50	"	70	"	"	"	---	---	---	---	20	35	55	"	"	"
0009	"	70	---	"	12,000	"	---	25	---	48	---	"	---	"	65	65	---	8	---	30	---	63	---	---	65	65
0011	"	100	70	"	5,000	.5	---	---	---	---	50	"	---	65	70	70	---	---	---	---	16	30	---	65	70	70
0012 2/	"	"	---	"	25,000	.1	---	15	---	60	60	"	---	"	65	65	---	13	---	27	58	70	---	"	65	65
0013	L_2	"	---	"	22,000	.1	10	---	30	---	---	42	45	---	60	60	8	---	28	---	---	40	43	---	60	60
0014	pi	50	---	20	10,000	.5	---	---	20	---	50	65	70	---	70	70	---	---	18	---	48	63	70	70	70	70

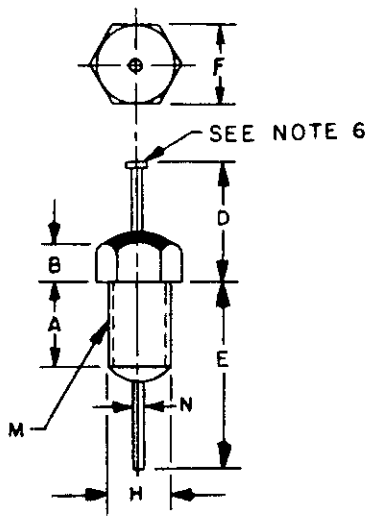
1/ Insertion loss measurements between 1 MHz and 20 MHz, inclusive, shall be performed at full load. Insertion loss measurements above 20 MHz shall be performed at no load.

2/ For dash number 0012 measurements shall be performed at -65°C and +85°C.

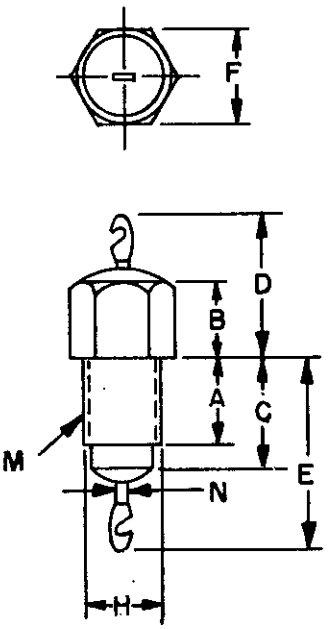
3/ Zero to 400 Hz over the rated temperature range of -55°C to +125°C.

FILTERS, RADIO FREQUENCY INTERFERENCE

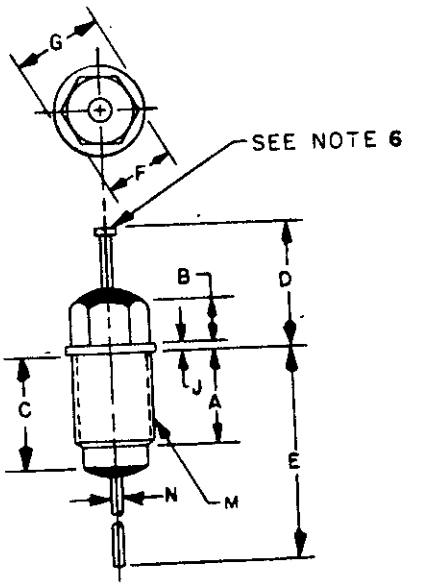
STYLES FL30, FL32, FL34, AND FL43



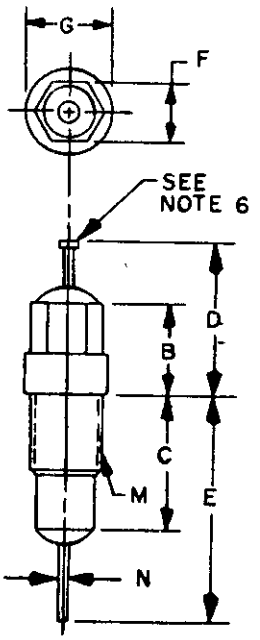
DASH NOS, 0002, 0008, 0013 AND 0014



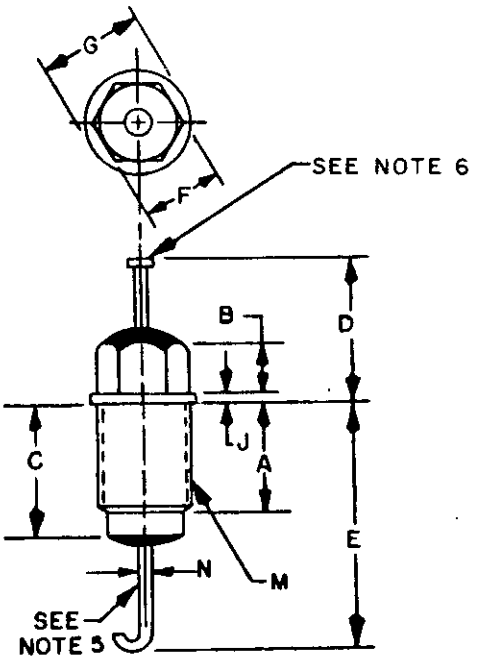
DASH NO. 0003



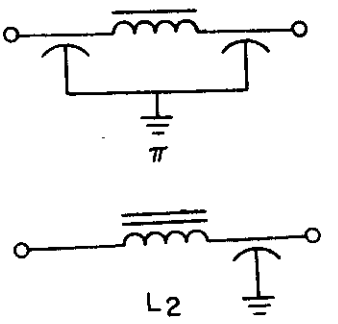
DASH NOS, 0006, 0007 AND 0011



DASH NO. 0009



DASH NO. 0012



CIRCUIT DIAGRAMS

FIGURE 102-2. Case dimensions and circuit configurations.

Dimensions and weight.

Dash number	A		B		C		D		E		F	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
0002	.203 (5.16)	.233 (5.92)	.172 (4.37)	.202 (5.13)	---	.291 (7.39)	.328 (8.33)	.390 (9.91)	.391 (9.93)	.515 (13.08)	.235 (5.97)	.265 (6.73)
0003	.203 (5.16)	.235 (5.97)	.235 (5.97)	.265 (6.73)	.390 (9.91)	.482 (12.24)	.531 (13.49)	.593 (15.06)	.719 (18.26)	.781 (19.84)	.360 (9.14)	.390 (9.91)
0006	.235 (5.97)	.265 (6.73)	.110 (2.79)	.140 (3.56)	.296 (7.52)	.326 (8.28)	.312 (7.92)	.374 (9.50)	.890 (22.61)	.952 (24.18)	.177 (4.50)	.197 (5.00)
0007	.240 (6.10)	.260 (6.60)	.115 (2.92)	.135 (3.43)	.296 (7.52)	.326 (8.28)	.312 (7.92)	.374 (9.50)	.890 (22.61)	.952 (24.18)	.177 (4.50)	.197 (5.00)
0008	.206 (5.23)	.226 (5.74)	.083 (2.11)	.103 (2.62)	---	.276 (7.01)	.281 (7.14)	.343 (8.71)	.363 (9.22)	.549 (13.49)	.177 (4.50)	.265 (6.73)
0009	---	---	.271 (6.88)	.291 (7.39)	.396 (10.06)	.416 (10.57)	.44 (11.2)	.50 (12.7)	.65 (16.5)	.71 (18.0)	.177 (4.50)	.197 (5.00)
0011	.235 (5.97)	.265 (6.73)	.110 (2.79)	.140 (3.56)	.296 (7.52)	.326 (8.28)	.312 (7.92)	.374 (9.50)	.890 (22.61)	.952 (24.18)	.172 (4.37)	.202 (5.13)
0012	.235 (5.97)	.265 (6.73)	.110 (2.79)	.140 (3.56)	.296 (7.52)	.326 (8.28)	.312 (7.92)	.374 (9.50)	.890 (22.61)	.952 (24.18)	.172 (4.37)	.202 (5.13)
0013	.201 (5.11)	.231 (5.87)	.078 (1.98)	.108 (2.74)	---	.276 (7.01)	---	.312 (7.92)	.859 (21.82)	.921 (23.39)	.171 (4.34)	.202 (5.13)
0014	.206 (5.23)	.226 (5.74)	.13 (3.3)	.17 (4.3)	---	.315 (8.00)	.31 (7.9)	---	.49 (12.4)	---	.177 (4.50)	.197 (5.00)

FIGURE 102-2. Case dimensions and circuit configuration - Continued.

FILTERS, RADIO FREQUENCY INTERFERENCE

STYLES FL30, FL32, FL34, AND FL43

Dimensions and weight.

Dash number	G		J		M Thread	N see note 9	Weight (grams)
	Min	Max	Min	Max			
0002	---	---	---	---	.216-32 UNEF-2A	AWG20 (.032)	2.2 max
0003	---	---	---	---	.3125-24 UNF-2A	AWG15 (.057)	7.1 max
0006	.220 (5.59)	.250 (6.35)	.017 (.43)	.047 (1.19)	.216-32 UNEF-2A	AWG20 (.032)	2.0 max
0007	.235 (5.97)	.265 (6.73)	---	.032 (.81)	.216-32 UNEF-2A	AWG20 (.032)	2.0 max
0008	---	---	---	---	.164-32 UNC-2A	AWG20 (.032)	2.0 max
0009	.240 (6.10)	.260 (6.60)	---	---	.216-32 UNEF-2A	AWG20 (.032)	3.2 max
0011	.220 (5.59)	.250 (6.35)	---	.032 (.81)	.216-32 UNEF-2A	AWG20 (.032)	2.0 max
0012	---	.235 (5.97)	---	.032 (.81)	.216-32 UNEF-2A	AWG20 (.032)	2.8 max
0013	---	---	---	---	.164-32 UNC-2A	AWG20 (.032)	2.2 max
0014	---	---	---	---	.164-32 UNC-2A	AWG20 (.032)	1.4 max

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Circuit diagram is for information only.
4. Case is ground terminal.
5. Hook bend radius: .046 (1.17 mm) (REF).
6. Turret headed terminal optional.
7. Mounting hardware (lock washer and hex nut) will be supplied with each filter.
8. Terminal identification (-0013): The case shall be marked at the threaded end of the filter, with the symbol "L".
9. The equivalent diameter in inches is shown in the parentheses.
10. Potting shall not extend beyond .030 (0.76 mm) inches from the filter body.

Figure 102-2. Case dimensions and circuit configurations - Continued.

FILTERS, RADIO FREQUENCY INTERFERENCE

STYLES FL31 AND FL47

Rated voltage: See table 102-III.

Rated current: 10 amperes.

Operating temperature range: -55°C to +125°C.

Capacitance to ground: See table 102-III.

Temperature rise: +25°C maximum.

Overload: 140 percent of rated current for 15 minutes.

Insertion loss: See table 102-III.

Part number: M15733/62- (dash number from table 102-III).

TABLE 102-III. Electrical characteristics (M15733/62).

Dash number	Rated voltage		Capacitance (min) pF	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/																						
				At +25°C												At -55°C and +125°C										
	V dc	2/ V rms		5 MHz	10 MHz	20 MHz	50 MHz	100 MHz	200 MHz	400 MHz	500 MHz	1 GHz	2 GHz	10 GHz	5 MHz	10 MHz	20 MHz	50 MHz	100 MHz	200 MHz	400 MHz	500 MHz	1 GHz	2 GHz	10 GHz
0001	200	140	1,500	---	3	13	32	45	58	---	70	70	---	70	---	---	5	15	28	46	---	70	70	---	70
0002	100	---	1,500	---	5	12	28	45	---	---	68	70	70	---	---	---	5	15	28	---	---	68	70	70	---
0003	70	---	1,500	5	---	19	---	50	---	65	---	65	---	65	---	---	7	---	32	---	63	---	65	---	65
0004	70	---	12,000	---	22	30	---	70	---	65	---	---	---	65	---	11	17	---	70	---	63	---	---	---	65

1/ Full-load insertion loss measurements shall be performed at 5, 10 and 20 MHz, all other measurements shall be performed at no-load.

2/ 0 to 400 Hz.

FILTERS, RADIO FREQUENCY INTERFERENCE

STYLES FL31 AND FL47

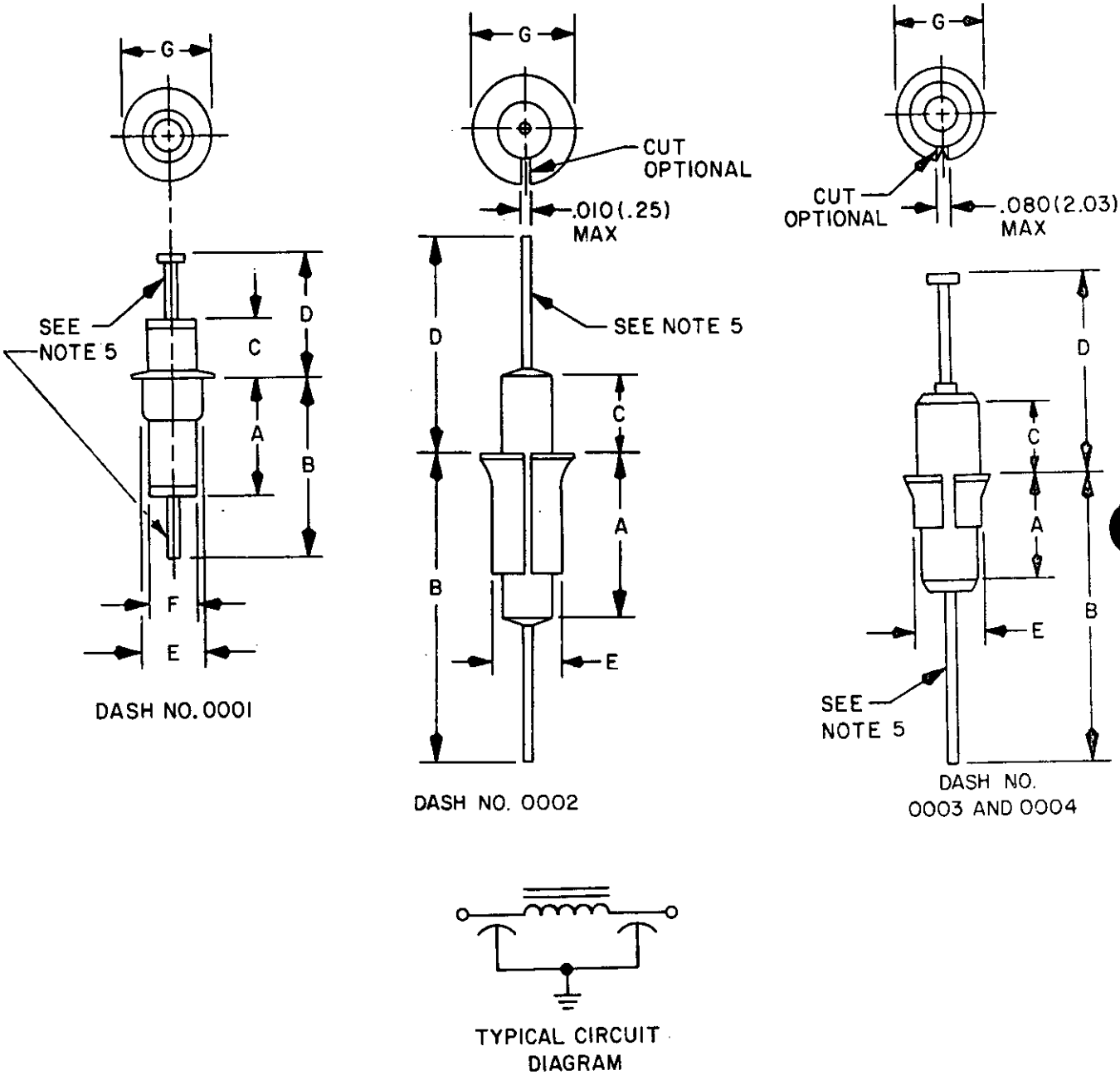


FIGURE 102-3. Case dimensions and circuit configuration.

FILTERS, RADIO FREQUENCY INTERFERENCE

STYLES FL31 AND FL47

Dash number	A		B		C	
	Min	Max	Min	Max	Min	Max
0001	.219 (5.56)	.281 (7.14)	.375 (9.52)	.437 (11.10)	.125 (3.18)	.187 (4.75)
0002	.185 (4.70)	.277 (7.04)	1.154 (29.31)	1.308 (33.22)	.078 (1.98)	.140 (3.56)
0003	.247 (6.27)	.297 (7.54)	.375 (9.52)	.500 (12.70)	.141 (3.58)	.171 (4.34)
0004	.131 (3.38)	.171 (4.34)	.749 (19.02)	.811 (20.60)	.078 (1.98)	.108 (2.77)

Dash number	D		E		F		G	
	Min	Max	Min	Max	Min	Max	Min	Max
0001	.281 (7.14)	.343 (8.71)	.130 (3.30)	.160 (4.06)	.110 (2.79)	.140 (3.56)	.175 (4.44)	.205 (5.21)
0002	1.047 (26.59)	1.171 (29.74)	.095 (2.41)	.125 (3.18)	---	---	.133 (3.37)	.153 (3.89)
0003	.281 (7.14)	.343 (8.71)	.130 (3.30)	.160 (4.06)	---	---	.175 (4.44)	.205 (5.21)
0004	.266 (6.76)	.281 (7.14)	.130 (3.30)	.160 (4.06)	---	---	.188 (4.77)	.203 (5.16)

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are in parentheses.
3. Metric equivalents are given for general information only.
4. Circuit diagram is for information only.
5. Leads shall be solid, tinned, AWG 20, .032 (0.81) diameter.

FIGURE 102-3. Case dimensions and circuit configuration - Continued.

FILTERS, RADIO FREQUENCY INTERFERENCE

STYLE FL37

Rated voltage: 350 V dc or 250 V rms to 400 Hz over the operating temperature range.

Rated current: 10 amperes dc or ac rms.

Operating temperature range: -55°C to +125°C.

Capacitance to ground: 5,000 pF.

Temperature rise: 25°C, maximum.

Overload: 140 percent of rated current for 15 minutes.

Insertion loss: See table 102-IV.

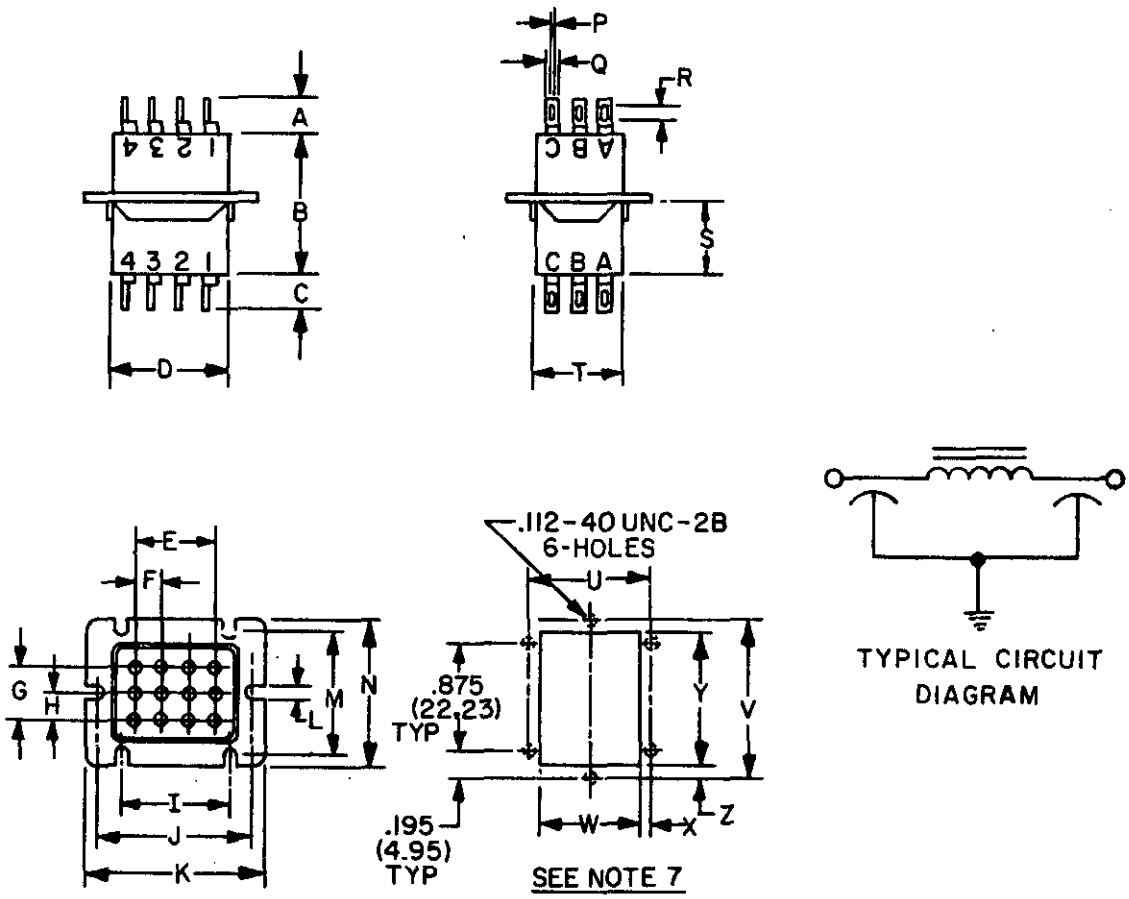
Part number: M15733/63-0001.

TABLE 102-IV. Insertion loss vs frequency (MIL-F-15733/63).

Dash number	Minimum insertion loss (dB) in accordance with with MIL-STD-220, at +25°C				
	50 MHz	100 MHz	200 MHz	500 MHz	1-10 GHz
0001	50	65	65	65	70

FILTERS, RADIO FREQUENCY INTERFERENCE

STYLE FL37



NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Item consists of twelve identical filter sections.
4. Circuit diagram is for information only.
5. Case is ground terminal.
6. Suggested mounting hole size and location for reference only.
7. Terminal identification shall be in accordance with figure above.

FIGURE 102-4. Case dimensions and circuit configuration.

Filter dimensions.

A		B		C		D	E	F	G	H	I	J
Min	Max	Min	Max	Min	Max	Typ.	Typ.	Typ.	Typ.	Typ.	Typ.	Typ.
.250 (6.35)	.312 (7.92)	1.093 (27.76)	1.157 (29.39)	.250 (6.35)	.312 (7.92)	.975 (24.77)	.656 (16.66)	.219 (5.56)	.418 (10.62)	.209 (5.31)	.875 (22.22)	1.250 (31.75)

K		L		M	N		P	Q	R	S		T	U	V
Min	Max	Min	Max	Typ.	Min	Max	Typ.	Typ.	Typ.	Min	Max	Typ.	Typ.	Typ.
1.422 (36.12)	1.452 (36.88)	.125 (3.18)	.135 (3.43)	1.000 (25.40)	1.172 (29.77)	1.202 (30.53)	.055 (1.40)	.100 (2.54)	.120 (3.05)	.562 (14.27)	.626 (15.90)	.710 (18.03)	1.010 (25.65)	1.265 (32.13)

W		X	Y		Z
Min	Max	Typ.	Min	Max	Typ.
.838 (21.29)	.848 (21.54)	.083 (2.11)	1.104 (28.04)	1.114 (28.30)	.078 (1.98)

FIGURE 102-4. Case dimensions and circuit configuration - Continued.

FILTERS, RADIO FREQUENCY INTERFERENCE

STYLE FL49

Rated voltage: 70 V dc.

Rated current: 10 amperes, dc.

Operating temperature range: -55°C to +125°C.

Capacitance to ground: 12,000 pF.

Temperature rise: 25°C, maximum.

Overload: 140 percent of rated current for 15 minutes.

Insertion loss: See table 102-V.

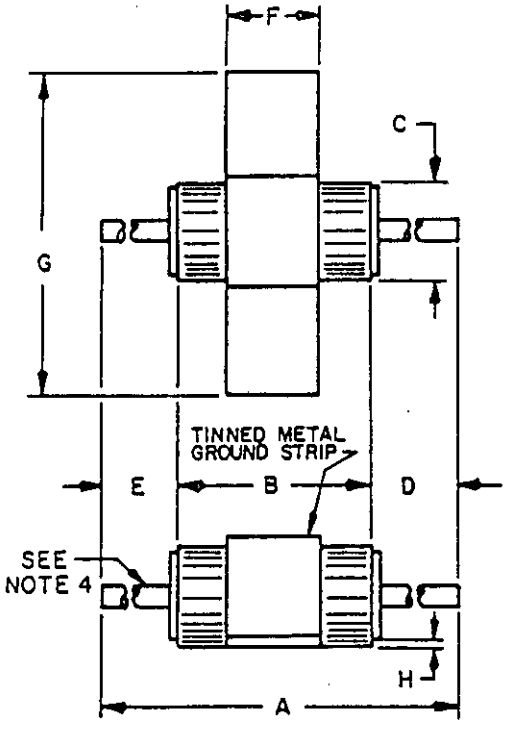
Part number: M15733/64-0001.

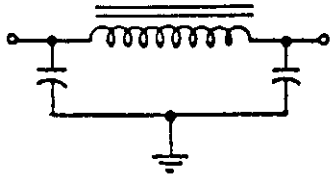
TABLE 102-V. Insertion loss vs frequency (MIL-F-15733/64).

Dash number	Minimum no load insertion loss (dB) in accordance with MIL-STD-220, at +25°C					
	10 MHz	20 MHz	100 MHz	400 MHz	1 GHz	10 GHz
0001	25	40	70	65	65	65

FILTERS, RADIO FREQUENCY INTERFERENCE

STYLE FL49





TYPICAL CIRCUIT DIAGRAM

Dash number	A		B		C		D		E	
	min	max	min	max	min	max	min	max	min	max
0001	1.049 (26.64)	1.111 (28.22)	.240 (.610)	.260 (.660)	-	.125 (3.18)	.405 (10.29)	.425 (10.80)	.405 (10.29)	.425 (10.80)

F		G		H	
min	max	min	max	min	max
.105 (2.67)	.125 (3.18)	.390 (9.91)	.410 (10.41)	-	.010 (0.25)

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Circuit diagram is for information only.
4. Leads shall be solid, tinned, AWG 20 .032 (0.81) diameter.

FIGURE 102-5. Case dimensions and circuit configuration.

SECTION 200

FILTERS, HIGH PASS, LOW PASS, AND BAND PASS (APPLICABLE SPECIFICATION: MIL-F-18327)

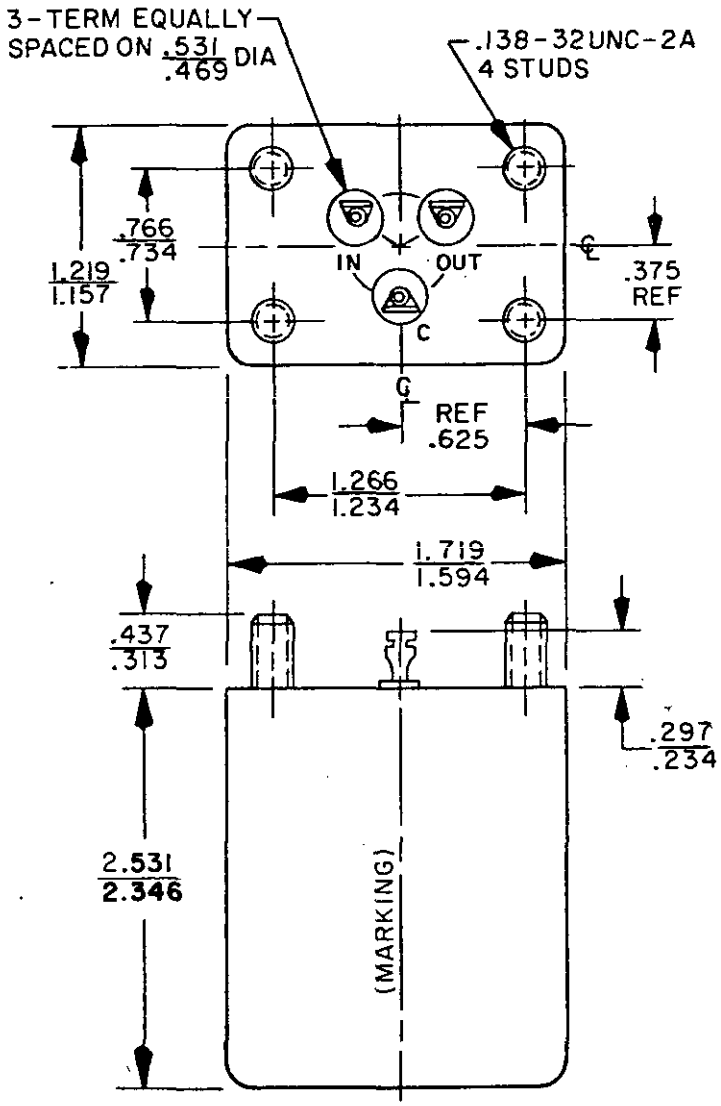
SECTION

SECTION 201

FILTERS, HIGH PASS

FILTERS, HIGH PASS

GRADE 6



Inches	mm
.234	5.94
.297	7.54
.313	7.95
.375	9.53
.437	11.10
.469	11.91
.531	13.49
.625	15.88
.734	18.64
.766	19.46
1.157	29.39
1.219	30.96
1.234	31.34
1.266	32.16
1.594	40.49
1.719	43.66
2.346	59.59
2.531	64.29

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal indentification: IN-C - Input
   OUT-C - Output

FIGURE 201-1. Case and mounting dimensions.

Part number: M18327/031- (dash number from table 201-I).

TABLE 201-I. Electrical characteristics (M18327/031).

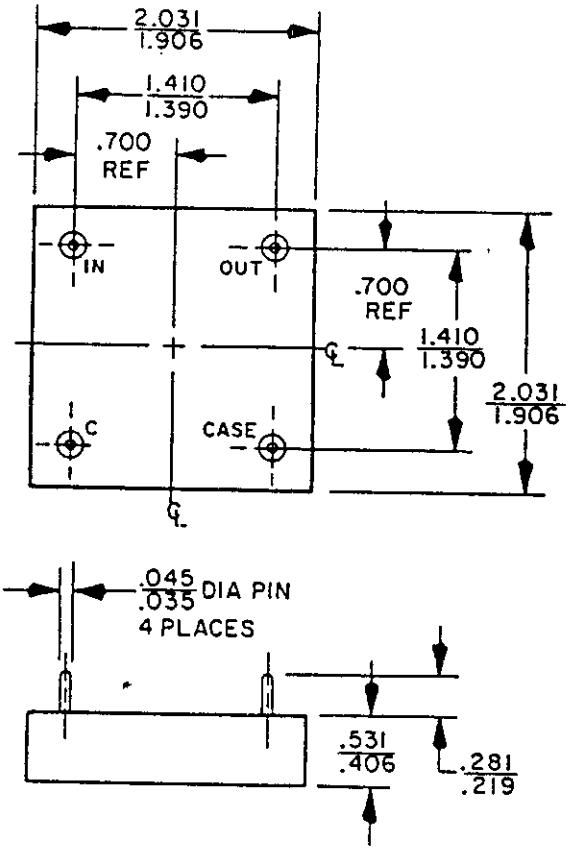
Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	10 K	10 K	250	2 max	5,000			Zero
	"	"		"	to 70		3	"
	"	"		"	50		9	"
	"	"		"	33.5	30		"
	"	"		"	25	35		"
002	"	"	500	"	100		6	"
	"	"		"	66.7	35		"
	"	"		"	50	40		"
003	"	"	750	"	150		6	"
	"	"		"	100	35		"
	"	"		"	75	40		"
004	"	"	1,000	"	200		6	"
	"	"		"	133	35		"
	"	"		"	100	40		"
005	"	"	1,500	"	300		6	"
	"	"		"	200	35		"
	"	"		"	150	40		"
006	"	"	2,000	"	400		6	"
	"	"		"	267	35		"
	"	"		"	200	40		"
007	"	"	2,500	"	500		6	"
	"	"		"	333	35		"
	"	"		"	250	40		"
008	"	"	3,000	"	600		6	"
	"	"		"	400	35		"
	"	"		"	300	40		"
009	"	"	4,000	"	800		6	"
	"	"		"	533	35		"
	"	"		"	400	40		"
010	"	"	5,000	"	1,000		6	"
	"	"		"	667	35		"
	"	"		"	500	40		"
011	"	"	6,000	"	1,200		6	"
	"	"		"	800	35		"
	"	"		"	600	40		"

TABLE 201-I. Electrical characteristics (M18327/031) - Continued.

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
012	10 K	10 K	10,000	2 max	2,000		6	Zero
	"	"		"	1,333	35		"
	"	"		"	1,000	40		"
013	"	"	12,000	"	2,400		6	"
	"	"		"	1,600	35		"
	"	"		"	1,200	40		"
014	"	"	15,000	"	3,000		6	"
	"	"		"	2,000	35		"
	"	"		"	1,500	40		"
015	"	"	24,000	"	4,800		6	"
	"	"		"	3,200	35		"
	"	"		"	2,400	40		"
016	600	600	200	"	40		6	"
	"	"		"	26.8	35		"
	"	"		"	20	40		"
017	"	"	1,000	"	200		6	"
	"	"		"	131	35		"
	"	"		"	100	40		"
018	"	"	1,500	"	300		6	"
	"	"		"	200	35		"
	"	"		"	150	40		"
019	"	"	2,500	"	500		6	"
	"	"		"	333	35		"
	"	"		"	250	40		"
020	"	"	5,000	"	1,000		6	"
	"	"		"	667	35		"
	"	"		"	500	40		"
021	"	"	15,000	"	3,000		6	"
	"	"		"	2,000	35		"
	"	"		"	1,500	40		"
022	"	"	35,000	"	7,000		6	"
	"	"		"	4,666	35		"
	"	"		"	3,500	40		"

FILTER, HIGH PASS

GRADE 6



Inches	mm
.035	0.89
.045	1.14
.219	5.56
.281	7.14
.406	10.31
.531	13.49
.700	17.78
1.390	35.31
1.410	35.81
1.906	48.41
2.031	51.59

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal identification: IN-C = Input OUT-C = Output Case = Case

FIGURE 201-2. Case and mounting dimensions.

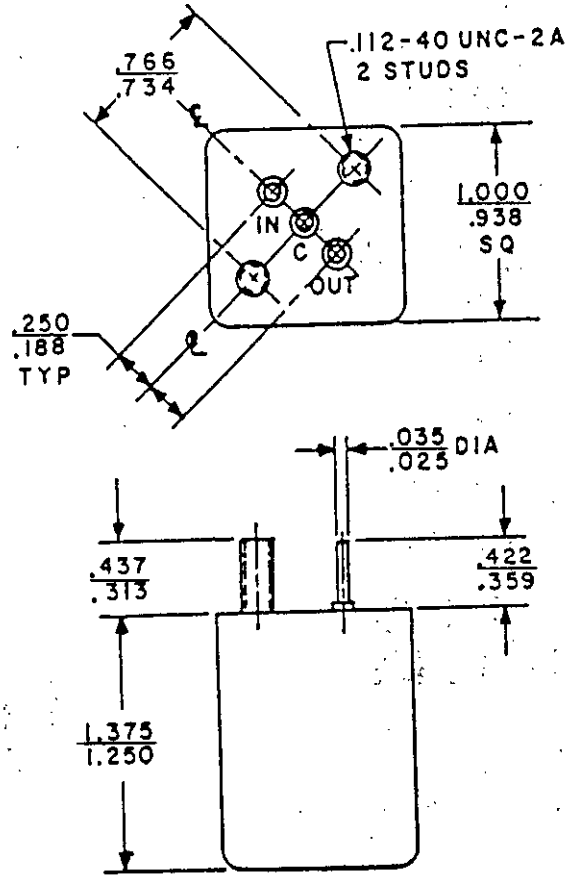
TABLE 201-II Electrical characteristics (M18327/048).

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	10 K	10 K	1,000	1 max	10,000 to 300 200 140 and below	40	1 2 to 4	Zero

Part number: M18327/048-001 (see table 201-II).

FILTER, HIGH PASS

GRADE 6



Inches	mm
.025	0.64
.035	0.89
.188	4.78
.250	6.35
.313	7.95
.359	9.12
.422	10.72
.437	11.10
.734	18.64
.766	19.46
.938	23.83
1.000	25.40
1.250	31.75
1.375	34.93

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal identification: IN - C Input
   OUT - C Output

FIGURE 201-3. Case and mounting dimensions.

TABLE 201-III Electrical characteristics (M18327/025).

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	10 K	10 K	3,000	2 max	5,000 620 415 310 and lower	 30 40	2 9	Zero

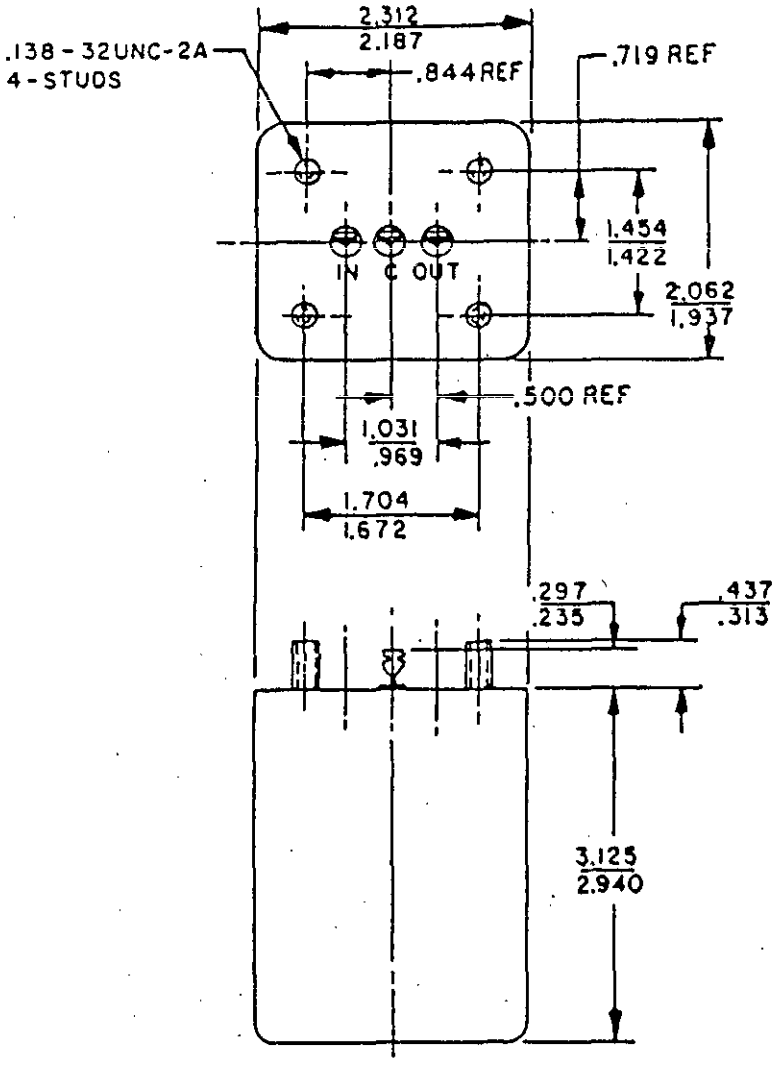
Part number: M18327/025-001 (see table 201-III).

SECTION 202

FILTERS, LOW PASS

REFERENCE FREQUENCIES (Hz)	MILITARY PART NUMBER	PAGE
4	M18327/047-001	202.2
10	M18327/030-002	202.3
20	M18327/030-003	"
25	M18327/030-001	"
30	M18327/030-004	"
40	M18327/030-005	"
80	M18327/030-006	"
100	M18327/030-007	"
100	M18327/030-017	"
160	M18327/030-008	"
200	M18327/030-009	"
200	M18327/030-018	"
300	M18327/030-010	"
400	M18327/030-011	"
400	M18327/030-019	"
500	M18327/030-012	"
500	M18327/030-020	"
600	M18327/030-013	"
600	M18327/030-021	"
800	M18327/030-014	"
800	M18327/030-022	"
1,000	M18327/030-015	"
1,600	M18327/030-023	"
2,000	M18327/030-016	"
2,000	M18327/030-024	"
2,400	M18327/030-025	"
50	M18327/018-001	202.7
120	M18327/051-002	202.8
1,000	M18327/051-001	202.8
1,000	M18327/032-001	202.10

FILTER, LOW PASS



Inches	mm
.235	5.97
.297	7.54
.313	7.95
.437	11.10
.500	12.70
.719	18.26
.844	21.44
.969	24.61
1.031	26.19
1.422	36.12
1.454	36.93
1.672	42.47
1.704	43.28
1.937	49.20
2.062	52.37
2.187	55.55
2.312	58.72
2.940	74.68
3.125	79.38

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal identification: IN - C = Input
   OUT - C = Output

FIGURE 202-1. Case and mounting dimensions.

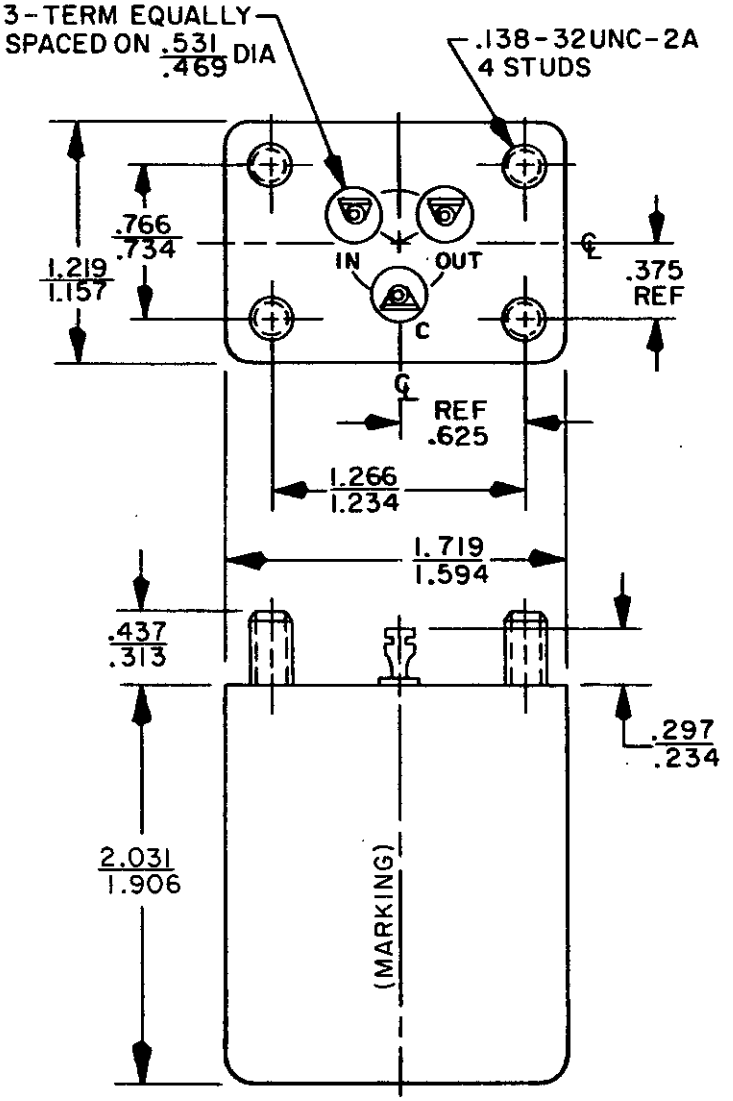
TABLE 202-I Electrical characteristics (M18327/047).

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	100 K	100 K	4	3 max	10		3	Zero
					20 and above	40		

Part number: M18327/047-001.

FILTER, LOW PASS

GRADE 6



Inches	mm
.234	5.94
.297	7.54
.313	7.95
.375	9.53
.437	11.10
.469	11.91
.531	13.49
.625	15.88
.734	18.64
.766	19.46
1.157	29.39
1.219	30.96
1.234	31.34
1.266	32.16
1.594	40.49
1.719	43.66
1.906	48.41
2.031	51.59

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal identification: IN-C - Input
   OUT-C - Output

FIGURE 202-2. Case and mounting dimensions.

Part number: M18327/030 - (dash number from table 202-II).

TABLE 202-II. Electrical characteristics (M18327/030).

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	10 K	10 K	25	2 max	64		3	Zero
	"	"		"	80		9	"
	"	"		"	120	30		"
	"	"		"	160	40		"
002	"	"	10	"	50		6	"
	"	"		"	75	30		"
	"	"		"	100	40		"
003	"	"	20	"	100		6	"
	"	"		"	150	30		"
	"	"		"	200	40		"
004	"	"	30	"	150		6	"
	"	"		"	225	35		"
	"	"		"	300	40		"
005	"	"	40	"	200		6	"
	"	"		"	300	35		"
	"	"		"	400	40		"
006	"	"	80	"	400		6	"
	"	"		"	600	35		"
	"	"		"	800	40		"
007	"	"	100	"	500		6	"
	"	"		"	750	35		"
	"	"		"	1,000	40		"
008	"	"	160	"	800		6	"
	"	"		"	1,200	35		"
	"	"		"	1,600	40		"
009	"	"	200	"	1,000		6	"
	"	"		"	1,500	35		"
	"	"		"	2,000	40		"
010	"	"	300	"	1,500		6	"
	"	"		"	2,250	35		"
	"	"		"	3,000	40		"
011	"	"	400	"	2,000		6	"
	"	"		"	3,000	35		"
	"	"		"	4,000	40		"

TABLE 202-II. Electrical characteristics (M18327/030) - Continued.

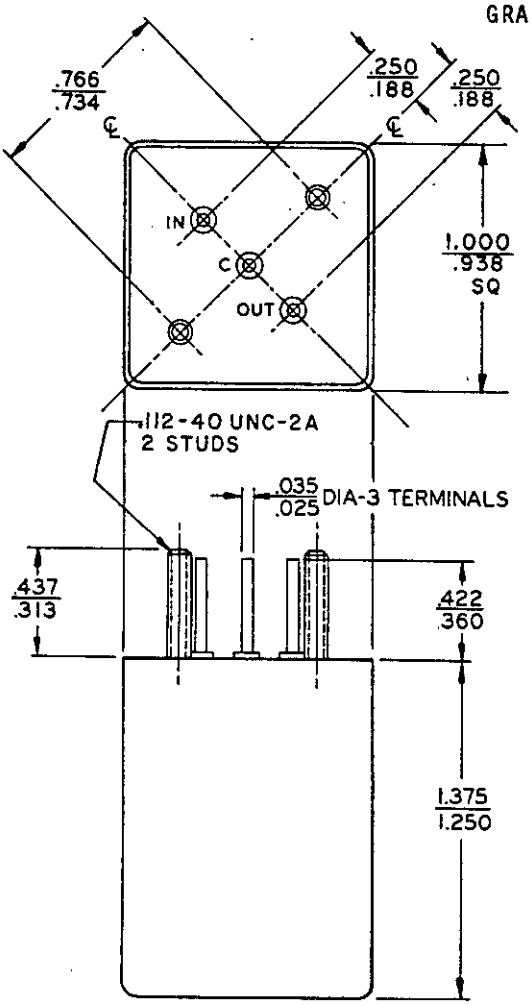
Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
012	10 K	10 K	500	2 max	2,500		6	Zero
	"	"		"	3,750	35		"
	"	"		"	5,000	40		"
013	"	"	600	"	3,000		6	"
	"	"		"	4,500	35		"
	"	"		"	6,000	40		"
014	"	"	800	"	4,000		6	"
	"	"		"	6,000	35		"
	"	"		"	8,000	40		"
015	"	"	1,000	"	5,000		6	"
	"	"		"	7,500	35		"
	"	"		"	10,000	40		"
016	"	"	2,000	"	10,000		6	"
	"	"		"	15,000	35		"
	"	"		"	20,000	40		"
017	600	600	100	"	500		6	"
	"	"		"	750	35		"
	"	"		"	1,000	40		"
018	"	"	200	"	1,000		6	"
	"	"		"	1,500	35		"
	"	"		"	2,000	40		"
019	"	"	400	"	2,000		6	"
	"	"		"	3,000	35		"
	"	"		"	4,000	40		"
020	"	"	500	"	2,500		6	"
	"	"		"	3,750	35		"
	"	"		"	5,000	40		"
021	"	"	600	"	3,000		6	"
	"	"		"	4,500	35		"
	"	"		"	6,000	40		"
022	"	"	800	"	4,000		6	"
	"	"		"	6,000	35		"
	"	"		"	8,000	40		"

TABLE 202-II. Electrical characteristics (M18327/030) - Continued.

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
023	600	600	1,600	2 max	8,000		6	Zero
	"	"		"	12,000	35		"
	"	"		"	16,000	40		"
024	"	"	2,000	"	10,000		6	"
	"	"		"	15,000	35		"
	"	"		"	20,000	40		"
025	"	"	2,400	"	12,000		6	"
	"	"		"	18,000	35		"
	"	"		"	24,000	40		"

FILTER, LOW PASS

GRADE 6



Inches	mm
.025	.64
.035	.89
.188	4.78
.250	6.35
.313	7.95
.360	9.14
.422	10.72
.437	11.10
.734	18.64
.766	19.46
.938	23.83
1.000	25.40
1.250	31.75
1.375	34.93

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal identification: IN - C - Input
   OUT - C - Output

FIGURE 202-3. Case and mounting dimensions.

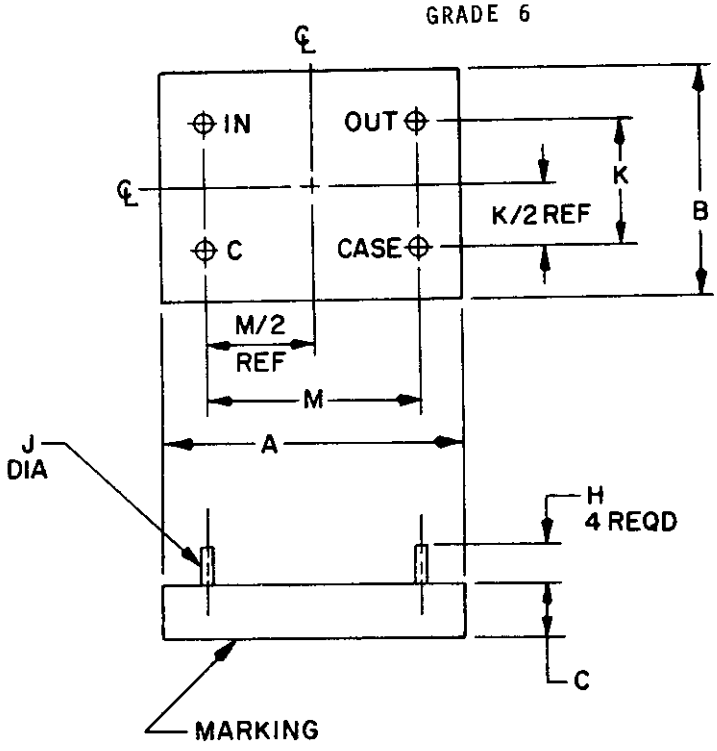
TABLE 202-III. Electrical characteristics (M18327/018).

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	10 K	10 K	50	3 max	10 to 200 265 397 530	 30 40	3 8 	Zero

Part number: M18327/018-001

FILTER, LOW PASS

GRADE 6



Dimensions and weight.

Dash number	Dimensions										
		A	B	C	H	J	K	K/2	M	M/2	Weight
0001	Min	1.906 (48.41)	1.469 (37.31)	.281 (7.14)	.219 (5.56)	.035 (.89)	.790 (20.07)	.400 (10.16)	1.390 (35.31)	.700 (17.78)	2 oz.
	Max	2.031 (51.59)	1.531 (38.89)	.406 (10.31)	.281 (7.14)	.045 (1.14)	.810 (20.57)		1.410 (35.81)		
0002	Min	1.906 (48.41)	1.906 (48.41)	.406 (10.31)	.219 (5.56)	.035 (.89)	1.390 (35.31)	.700 (17.78)	1.390 (35.31)	.700 (17.78)	2.6 oz.
	Max	2.031 (51.59)	2.031 (51.59)	.531 (13.49)	.281 (7.14)	.045 (1.14)	1.410 (35.81)		1.410 (35.81)		

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are in parentheses.
3. Metric equivalents are given for general information only.
4. Terminal identification: IN - C - Input
   OUT - C - Output

FIGURE 202-4. Case and mounting dimensions.

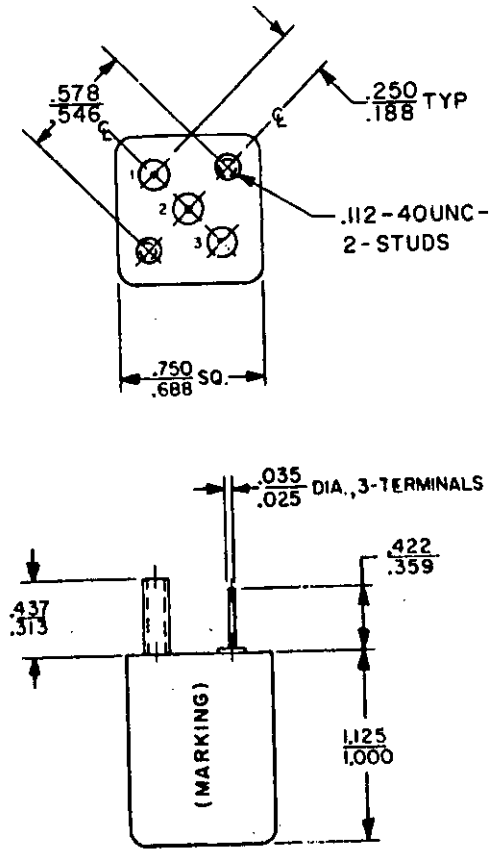
Part number: M18327/051- (dash number from table 202-IV).

TABLE 202-IV Electrical characteristics (M18327/051).

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	10 K	10 K	1,000	1 max	DC to 4.2 kHz 5 kHz 6.4 kHz and above	 43	1 1.5 to 4.5	Zero
002	10 K	10 K	120	2 max	DC to 450 Hz 600 800	 1 36	1 5	Zero

FILTER, LOW PASS

GRADE 6



Inches	mm
.025	.64
.035	.89
.188	4.78
.250	6.35
.313	7.95
.359	9.12
.422	10.72
.437	11.10
.546	13.87
.578	14.68
.688	17.48
.750	19.05
1.000	25.40
1.125	28.58

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal identification:

Input - 1-2
Output - 3-2

FIGURE 202-5. Case and mounting dimensions.

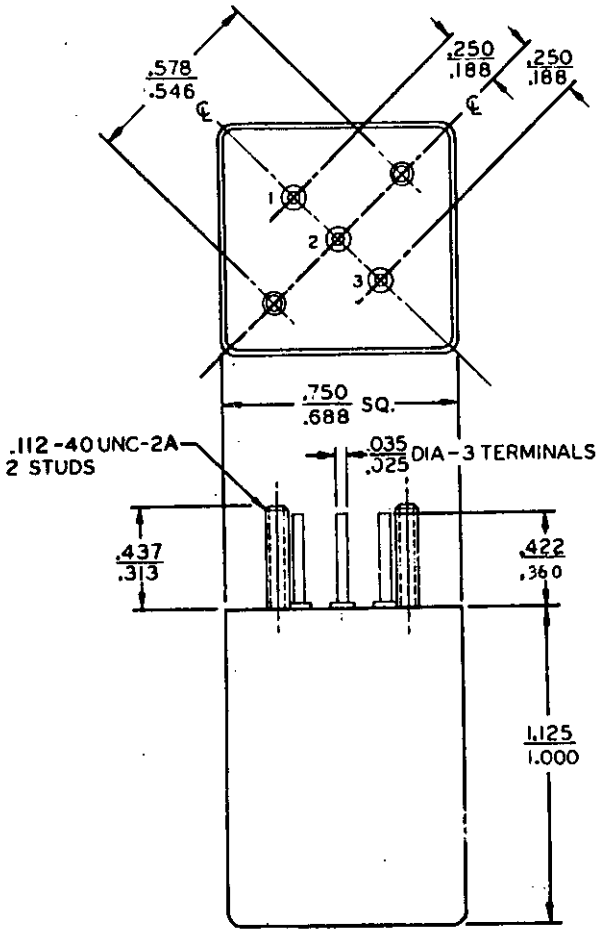
TABLE 202-V Electrical characteristics (M18327/032).

Dash number	Impedance (ohms)		Reference frequency (kHz)	Insertion loss (dB)	Frequency range (kHz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	10 K	10 K	1	1 max	.1 through 4.8		2	Zero
					6		6	
					9	28		
					12	40		

Part number: M18327/032-001.

SECTION 203

FILTERS, BANDPASS



Inches	mm
.025	.64
.035	.89
.188	4.78
.250	6.35
.313	7.95
.360	9.14
.422	10.72
.437	11.10
.546	13.87
.578	14.68
.688	17.48
.750	19.05
1.000	25.40
1.125	28.58

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal identification:

Input - 1-2
Output - 3-2

FIGURE 203-1. Case and mounting dimensions.

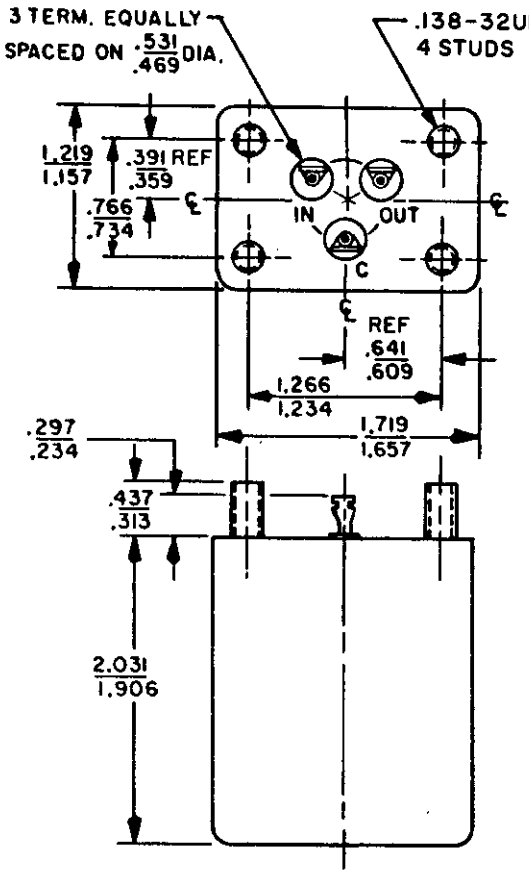
TABLE 203-I. Electrical characteristics (M18327/19).

Dash number	Impedance (ohms)		Reference frequency (kHz)	Insertion loss (dB)	Frequency range (kHz)	Discrimination (dB)	
	Source	Load				Min	Max
001	500	500	40	3 max	20 38 thru 42 80	35 35	 4

Part number: M18327/019-001.

FILTER, BANDPASS

GRADE 6



Inches	mm
.234	5.94
.297	7.54
.313	7.95
.359	9.12
.391	9.93
.437	11.10
.469	11.91
.531	13.49
.609	15.47
.641	16.28
.734	18.64
.766	19.46
1.157	29.39
1.219	30.96
1.234	31.34
1.266	32.16
1.657	42.09
1.719	43.66
1.906	48.41
2.031	51.59

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal identification:

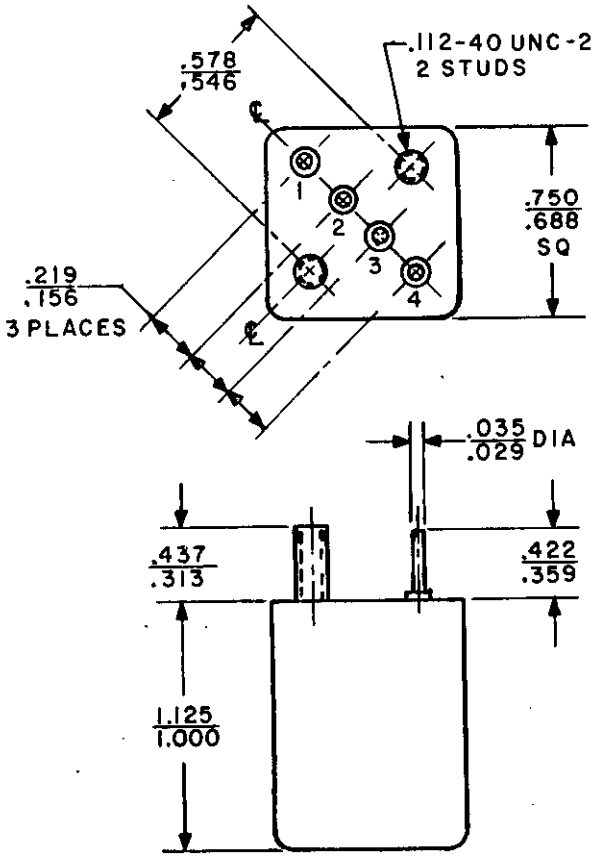
Input - IN-C
Output - OUT-C

FIGURE 203-2. Case and mounting dimensions.

TABLE 203-II. Electrical characteristics (M18327/023).

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion gain (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	10 K	20 M	40	3 min	20	30		0
					38.8		4	
					41.2		4	
					80	30		

Part number: M18327/023-001.



Inches	mm
.025	.64
.035	.89
.156	3.96
.219	5.56
.313	7.95
.359	9.12
.422	10.72
.437	11.10
.546	13.87
.578	14.68
.688	17.48
.750	19.05
1.000	25.40
1.125	28.58

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal identification:

1 - 2 Input
2 - 3 Output (10k)
2 - 4 Output (20 Meg)

FIGURE 203-3. Case and mounting dimensions.

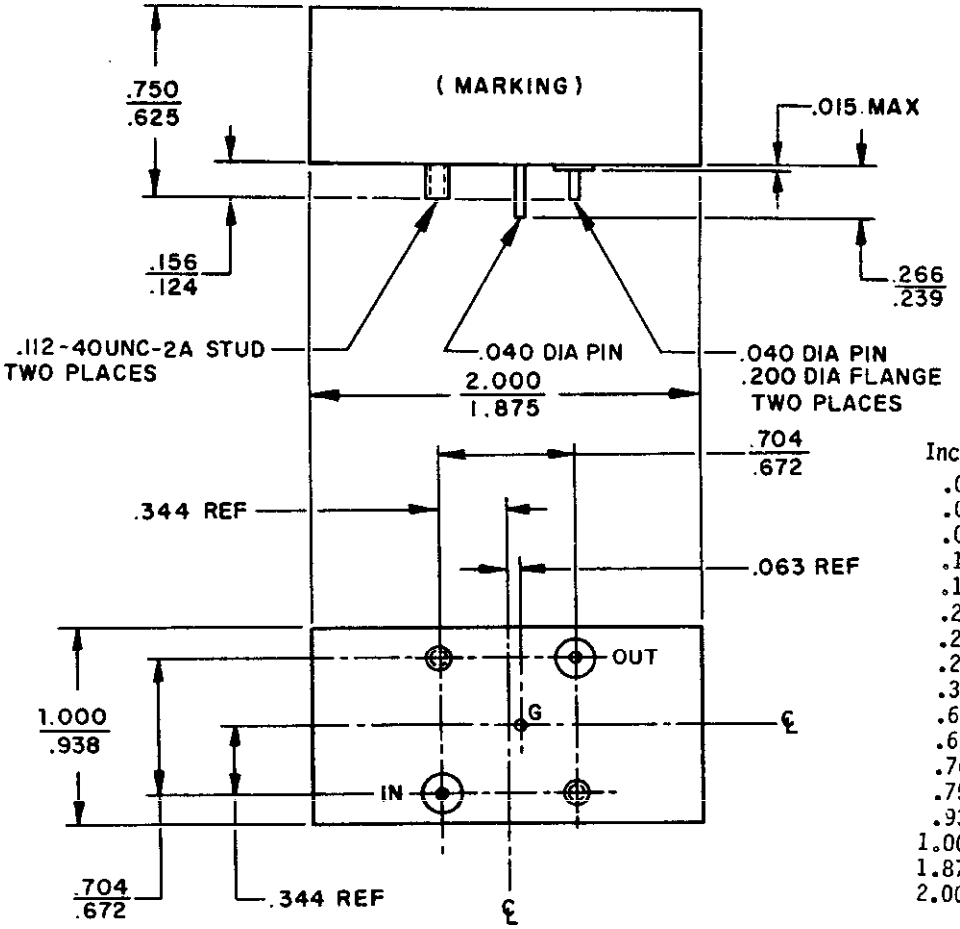
TABLE 203-III. Electrical characteristics (M18327/024).

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	10 K 10 K	10 K 20 M	405	10 max +3 min. gain	202.5 393 to 417 810	30 30	4	0

Part number: M18327/024-001.

FILTER, BANDPASS

GRADE 4



Inches	mm
.015	.38
.040	1.02
.063	1.60
.124	3.15
.156	3.96
.200	5.08
.239	6.07
.266	6.76
.344	8.74
.625	15.88
.672	17.07
.704	17.88
.750	19.05
.938	23.83
1.000	25.40
1.875	47.63
2.000	50.80

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Crystal filter.
4. Unless otherwise specified, tolerance is ±.016 (0.41 mm).
5. Terminal identification:

Input - IN
Output - OUT
Ground - G

FIGURE 203-4. Case and mounting dimensions.

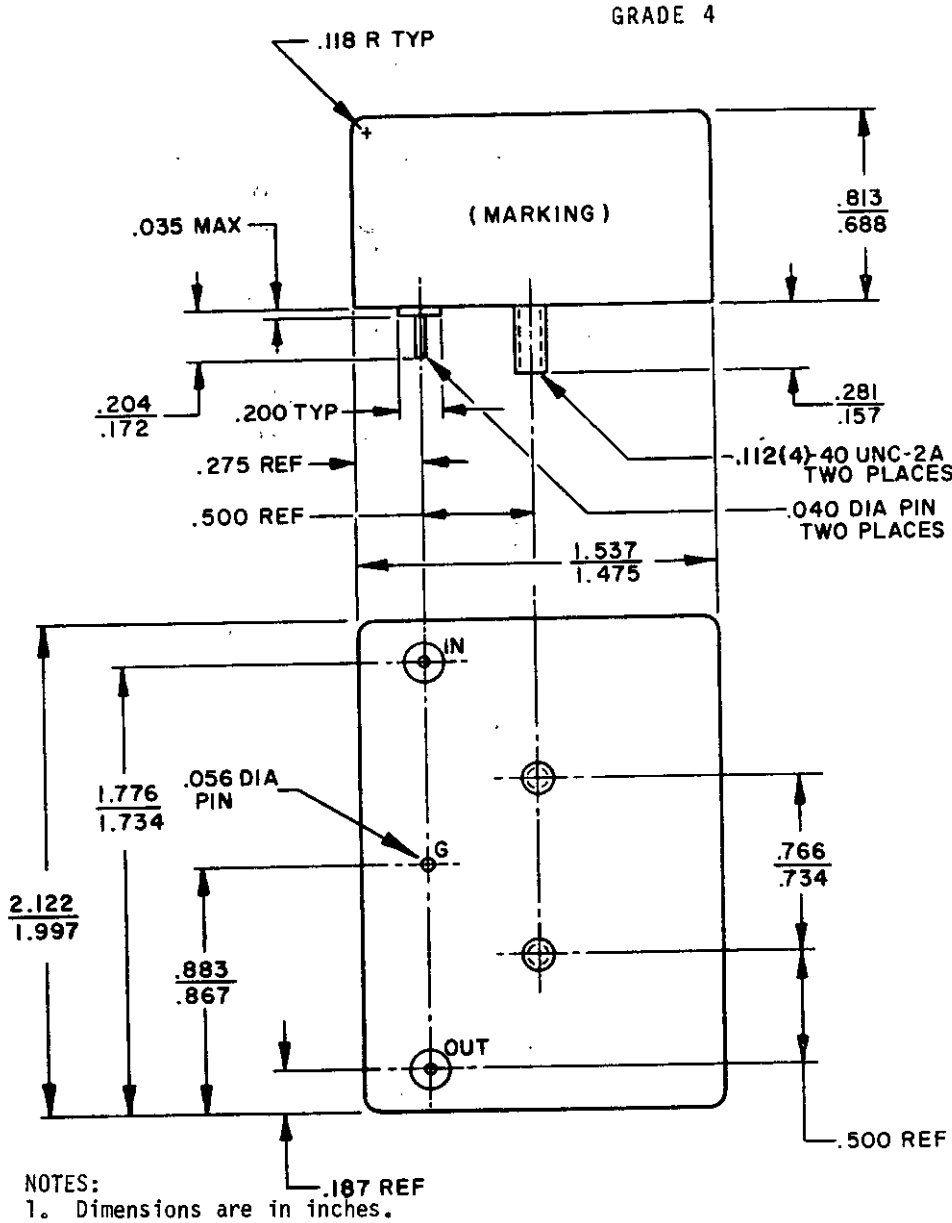
TABLE 203-IV. Electrical characteristics (M18327/027).

Dash number	Impedance (ohms) Source	Impedance (ohms) Load	Reference frequency (MHz)	Insertion loss (dB)	Frequency range (MHz)	Discrimination (dB) Min	Discrimination (dB) Max	DC operating voltage (volts)
001	2 K	2 K	18.6	3 max	18.545	60		0
					18.578		6	
					18.622		6	
					18.655	60		

Part number: M18327/027-001.

FILTER, BANDPASS

GRADE 4



Inches	mm
.035	.89
.040	1.02
.056	1.42
.118	3.00
.157	3.99
.172	4.37
.187	4.75
.200	5.08
.204	5.18
.275	6.99
.281	7.14
.500	12.70
.688	17.48
.734	18.64
.766	19.46
.813	20.65
.867	22.02
.883	22.43
1.475	37.47
1.537	39.04
1.734	44.04
1.776	45.11
1.997	50.72
2.122	53.90

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ±.005 (0.13 mm).
4. Terminal identification: Input - IN
   Output - OUT
   Ground - G

FIGURE 203-5. Case and mounting dimensions.

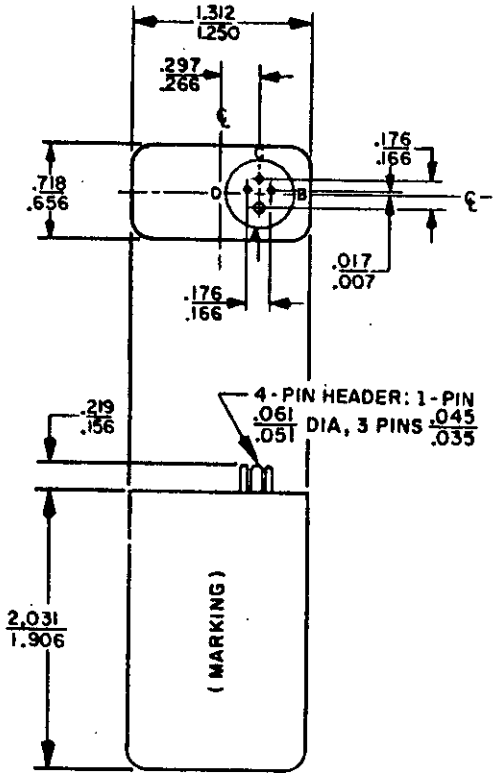
TABLE 203-V. Electrical characteristics (M18327/029).

Dash number	Impedance (ohms)		Reference frequency (MHz)	Insertion loss (dB)	Frequency range (MHz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	550 min	550 min	53.0	16 max	51.00	26		0
					52.05		6	
					54.30		6	
					56.00	26		

Part number: M18327/029-001.

FILTER, BANDPASS

GRADE 6



Inches	mm
.007	.18
.017	.43
.035	.89
.045	1.14
.051	1.30
.061	1.55
.156	3.96
.166	4.22
.176	4.47
.219	5.56
.266	6.76
.297	7.54
.656	16.66
.718	18.24
1.250	31.75
1.312	33.32
1.906	48.41
2.031	51.59

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal identification:

Input - A-B
Output - D-C

FIGURE 203-6. Case and mounting dimensions.

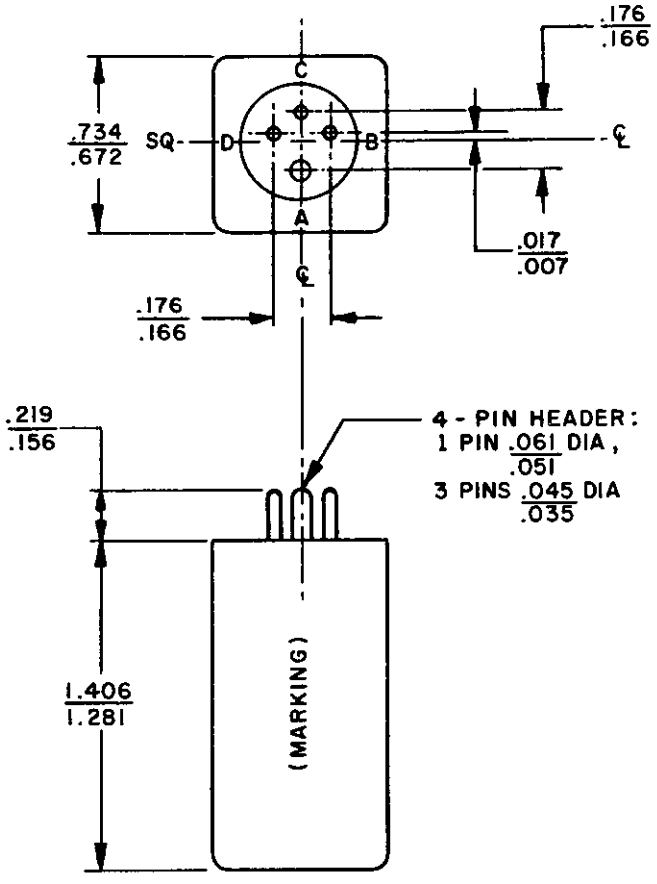
TABLE 203-VI. Electrical characteristics (M18327/033).

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	100 K	100 K	400	8 max	228	40		0
					300	15		
					370		4	
					430		4	
					500	15		
					700	40		

Part number: M18327/033-001.

FILTER, BANDPASS

GRADE 6



Inches	mm
.007	.18
.017	.43
.035	.89
.045	1.14
.051	1.30
.061	1.55
.156	3.96
.166	4.22
.176	4.47
.219	5.56
.672	17.07
.734	18.64
1.281	32.54
1.406	35.71

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal identification:

Input - A-B
Output - D-C

FIGURE 203-7. Case and mounting dimensions.

TABLE 203-VII. Electrical characteristics (M18327/034).

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	100 K	100 K	2300	8 max	1300	40		0
					1725	15		
					2128		4	
					2473		4	
					2875	15		
					4025	40		

Part number: M18327/034-001.

FILTER, BANDPASS

GRADE 7

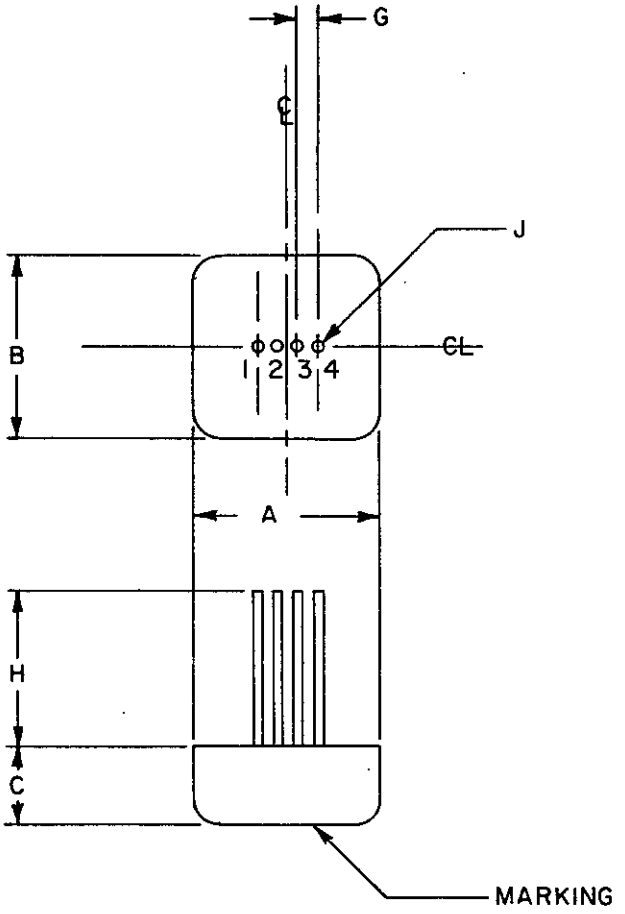


FIGURE 203-8. Case and mounting dimensions.

Part number: M18327/046- (see figure 203-8 and table 203-VIII for dash numbers).

Part number M18327/046	Dimensions						
	A	B	C	G (Typ)	H	J (Dia. 4 reqd)	Weight (oz)
001	1.219(30.96) 1.157(29.39)	1.219(30.96) 1.157(29.39)	.531(13.49) .406(10.31)	.210(5.33) .190(4.83)	1.125(28.58) .875(22.22)	.025(.64)	1
002	.734(18.64) .672(17.07)	.734(18.64) .672(17.07)	.531(13.49) .406(10.31)	.110(2.79) .090(2.29)	"	"	.25
003	.734(18.64) .672(17.07)	.734(18.64) .672(17.07)	.36(9.1) .30(7.6)	.110(2.79) .090(2.29)	"	"	.20
004	1.219(30.96) 1.157(29.39)	1.219(30.96) 1.157(29.39)	.531(13.49) .406(10.31)	.210(5.33) .190(4.83)	"	"	"
005	"	"	"	"	"	"	"
006	"	"	"	"	"	"	"
007	"	"	"	"	"	"	"
008	"	"	"	"	"	"	"
009	"	"	"	"	"	"	"
010	"	"	"	"	"	"	"
011	"	"	"	"	"	"	"
012	"	"	"	"	"	"	"
013	"	"	"	"	"	"	"
014	1.219(30.96) 1.157(29.39)	1.219(30.96) 1.157(29.39)	"	.210(5.33) .190(4.83)	"	"	.20
015	.734(18.64) .672(17.07)	.734(18.64) .672(17.07)	"	.110(2.79) .090(2.29)	"	"	.33
016	"	"	"	"	"	"	"
017	"	"	"	"	"	"	"
018	"	"	"	"	"	"	"
019	"	"	"	"	"	"	"
020	"	"	"	"	"	"	"
021	"	"	"	"	"	"	"
022	"	"	"	"	"	"	"
023	"	"	"	"	"	"	"
024	"	"	.531(13.49) .406(10.31)	"	"	"	.33
025	"	"	.36(9.1) .30(7.6)	"	"	"	.20
026	"	"	"	"	"	"	"
027	"	"	"	"	"	"	"
028	.734(18.64) .672(17.07)	.734(18.64) .672(17.07)	.36(9.1) .30(7.6)	.110(2.79) .090(2.29)	1.125(28.58) .875(22.22)	.025(.64)	.20

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are in parentheses.
3. Metric equivalents are given for general information only.
4. Terminal identification:

Input - 1-2
Output - 3-4

FIGURE 203-8. Case and mounting dimensions - Continued.

FILTER, BANDPASS

GRADE 7

TABLE 203-VIII. Electrical characteristics (M18327/046).

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB) (max)	Frequency range (Hz)	Discrimination (dB)		Signal input level (volts to source resistor)	DC operating voltage (volts)
	Source	Load				Min	Max		
001	10 K	10 K	400	8	228	40		2.0	0
	"	"			300	15		"	"
	"	"			370		4	"	"
	"	"			430		4	"	"
	"	"			500	15		"	"
	"	"			700	40		"	"
002	"	"	7,350	8	4,190	40		"	"
	"	"			5,512	15		"	"
	"	"			6,799		4	"	"
	"	"			7,901		4	"	"
	"	"			9,188	15		"	"
	"	"			12,863	40		"	"
003	"	"	93,000	6	53,940	40		"	"
	"	"			69,750	15		"	"
	"	"			86,025		4	"	"
	"	"			99,975		4	"	"
	"	"			116,250	15		"	"
	"	"			162,750	40		"	"
004	"	"	560	8	325	40		"	"
	"	"			420	15		"	"
	"	"			518		4	"	"
	"	"			602		4	"	"
	"	"			700	15		"	"
	"	"			980	40		"	"
005	"	"	730	8	423	40		"	"
	"	"			548	15		"	"
	"	"			675		4	"	"
	"	"			785		4	"	"
	"	"			913	15		"	"
	"	"			1,278	40		"	"
006	"	"	960	6	557	40		"	"
	"	"			720	15		"	"
	"	"			888		4	"	"
	"	"			1,032		4	"	"
	"	"			1,200	15		"	"
	"	"			1,680	40		"	"
007	"	"	1,000	6	580	40		"	"
	"	"			750	15		"	"
	"	"			925		4	"	"
	"	"			1,075		4	"	"
	"	"			1,250	15		"	"
	"	"			1,750	40		"	"

FILTER, BANDPASS

GRADE 7

TABLE 203-VIII. Electrical characteristics (M18327/046) - Continued.

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB) (max)	Frequency range (Hz)	Discrimination (dB)		Signal input level (volts to source resistor)	DC operating voltage (volts)
	Source	Load				Min	Max		
008	10 K	10 K	1,300	6	754	40		2.0	0
	"	"			975	15		"	"
	"	"			1,203		4	"	"
	"	"			1,398		4	"	"
	"	"			1,625	15		"	"
	"	"			2,275	40		"	"
009	"	"	1,700	"	986	40		"	"
	"	"			1,275	15		"	"
	"	"			1,573		4	"	"
	"	"			1,828		4	"	"
	"	"			2,125	15		"	"
	"	"			2,975	40		"	"
010	"	"	2,300	"	1,334	40		"	"
	"	"			1,725	15		"	"
	"	"			2,128		4	"	"
	"	"			2,473		4	"	"
	"	"			2,875	15		"	"
	"	"			4,025	40		"	"
011	"	"	3,000	"	1,740	40		"	"
	"	"			2,250	15		"	"
	"	"			2,775		4	"	"
	"	"			3,225		4	"	"
	"	"			3,750	15		"	"
	"	"			5,250	40		"	"
012	"	"	3,900	"	2,262	40		"	"
	"	"			2,925	15		"	"
	"	"			3,608		4	"	"
	"	"			4,193		4	"	"
	"	"			4,875	15		"	"
	"	"			6,825	40		"	"
013	"	"	4,000	"	2,320	40		"	"
	"	"			3,000	15		"	"
	"	"			3,700		4	"	"
	"	"			4,300		4	"	"
	"	"			5,000	15		"	"
	"	"			7,000	40		"	"
014	"	"	5,400	"	3,132	40		"	"
	"	"			4,050	15		"	"
	"	"			4,995		4	"	"
	"	"			5,805		4	"	"
	"	"			6,750	15		"	"
	"	"			9,450	40		"	"

FILTER, BANDPASS

GRADE 7

TABLE 203-VIII. Electrical characteristics (M18327/046) - Continued.

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB) (max)	Frequency range (Hz)	Discrimination (dB)		Signal input level (volts to source resistor)	DC operating voltage (volts)
	Source	Load				Min	Max		
015	10 K	10 K	8,000	6	4,640	40		2.0	0
	"	"			6,000	15		"	"
	"	"			7,400		4	"	"
	"	"			8,600		4	"	"
	"	"			10,000	15		"	"
	"	"			14,000	40		"	"
016	"	"	10,500	"	6,090	40		"	"
	"	"			7,875	15		"	"
	"	"			9,713		4	"	"
	"	"			11,288		4	"	"
	"	"			13,125	15		"	"
	"	"			18,375	40		"	"
017	"	"	12,000	"	6,960	40		"	"
	"	"			9,000	15		"	"
	"	"			11,100		4	"	"
	"	"			12,900		4	"	"
	"	"			15,000	15		"	"
	"	"			21,000	40		"	"
018	"	"	14,500	"	8,410	40		"	"
	"	"			10,875	15		"	"
	"	"			13,413		4	"	"
	"	"			15,588		4	"	"
	"	"			18,125	15		"	"
	"	"			25,375	40		"	"
019	"	"	22,000	"	12,760	40		"	"
	"	"			16,500	15		"	"
	"	"			20,350		4	"	"
	"	"			23,650		4	"	"
	"	"			27,500	15		"	"
	"	"			38,500	40		"	"
020	"	"	30,000	"	17,400	40		"	"
	"	"			22,500	15		"	"
	"	"			27,750		4	"	"
	"	"			32,250		4	"	"
	"	"			37,500	15		"	"
	"	"			52,500	40		"	"
021	"	"	40,000	"	23,200	40		"	"
	"	"			30,000	15		"	"
	"	"			37,000		4	"	"
	"	"			43,000		4	"	"
	"	"			50,000	15		"	"
	"	"			70,000	40		"	"

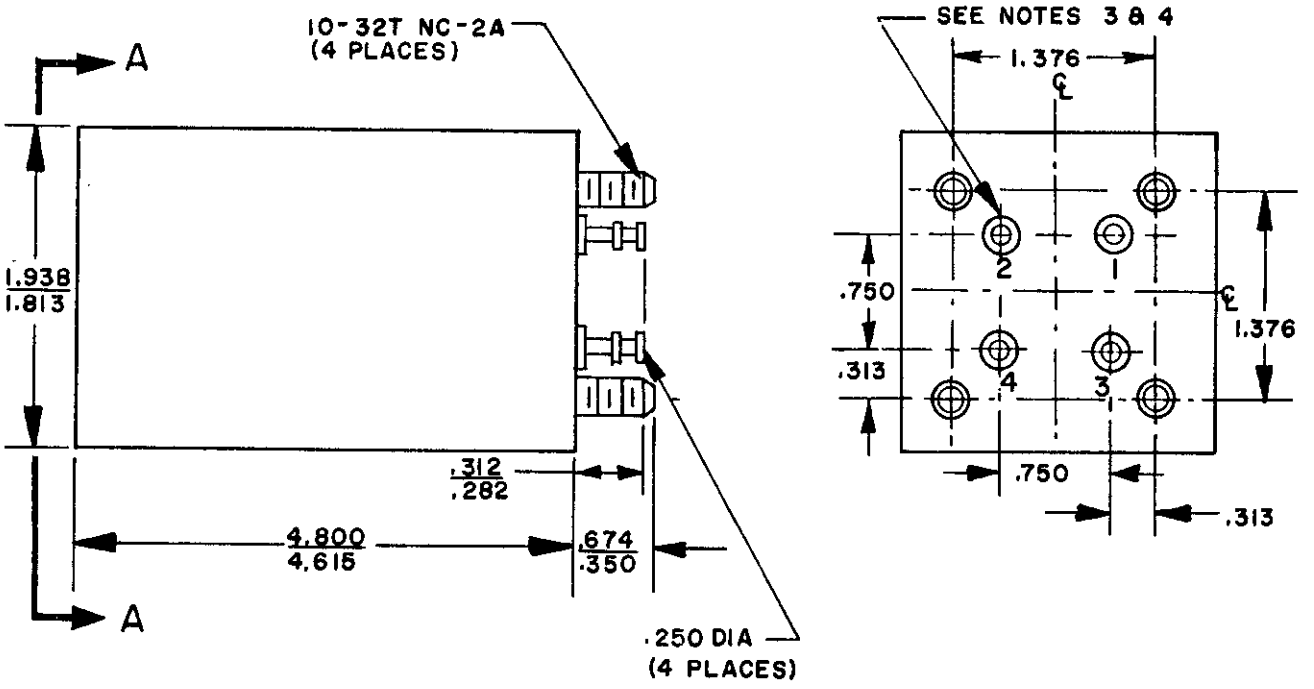
FILTER, BANDPASS

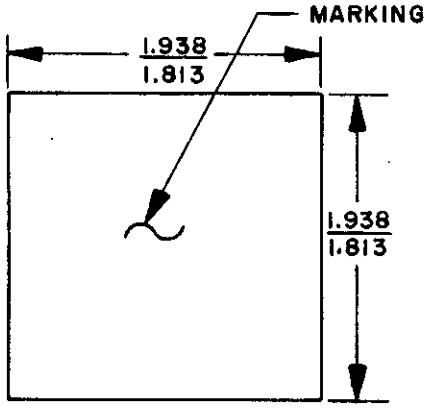
GRADE 7

TABLE 203-VIII. Electrical characteristics (M18327/046) - Continued.

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB) (max)	Frequency range (Hz)	Discrimination (dB)		Signal input level (volts to source resistor)	DC operating voltage (volts)
	Source	Load				Min	Max		
022	10 K	10 K	52,500	6	30,450	40		2.0	0
	"	"			39,375	15		"	"
	"	"			48,563		4	"	"
	"	"			56,438		4	"	"
	"	"			65,625	15		"	"
	"	"			91,875	40		"	"
023	"	"	56,000	"	32,480	40		"	"
	"	"			42,000	15		"	"
	"	"			51,800		4	"	"
	"	"			60,200		4	"	"
	"	"			70,000	15		"	"
	"	"			98,000	40		"	"
024	"	"	70,000	"	40,600	40		"	"
	"	"			52,500	15		"	"
	"	"			64,750		4	"	"
	"	"			75,250		4	"	"
	"	"			87,500	15		"	"
	"	"			122,500	40		"	"
025	"	"	96,000	"	55,680	40		"	"
	"	"			72,000	15		"	"
	"	"			88,800		4	"	"
	"	"			103,200		4	"	"
	"	"			120,000	15		"	"
	"	"			168,000	40		"	"
026	"	"	124,000	"	71,920	40		"	"
	"	"			93,000	15		"	"
	"	"			114,700		4	"	"
	"	"			133,300		4	"	"
	"	"			155,000	15		"	"
	"	"			217,000	40		"	"
027	"	"	160,000	"	92,800	40		"	"
	"	"			120,000	15		"	"
	"	"			148,000		4	"	"
	"	"			172,000		4	"	"
	"	"			200,000	15		"	"
	"	"			280,000	40		"	"
028	"	"	165,000	"	95,700	40		"	"
	"	"			123,750	15		"	"
	"	"			152,625		4	"	"
	"	"			177,375		4	"	"
	"	"			206,250	15		"	"
	"	"			288,750	40		"	"

FILTER, BANDPASS
GRADE 4





VIEW A-A

Inches	mm
.250	6.35
.282	7.16
.312	7.92
.313	7.95
.674	17.12
.750	19.05
1.376	34.95
1.813	46.05
1.938	49.23
4.615	117.22
4.800	121.92

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Terminal identification: 1 - 2 Input
   3 - 4 Output
4. Terminal design optional, but must accept 2 tinned #20 stranded wires. Insulation portion of terminal No. 1 shall be of a different color than the insulation portion of terminals 2, 3 and 4. Terminals 2, 3, and 4 shall have the same insulation color.

FIGURE 203-9. Case configuration and dimensions.

TABLE 203-IX. Electrical characteristics (M18327/067).

Dash number	Impedance (ohms)		Reference frequency (Hz)	Insertion loss (dB) (max)	Frequency range (Hz)	Discrimination (dB)		DC operating voltage (volts)
	Source	Load				Min	Max	
001	1000 ±15%	2000 ±1.0%	12015	7.5 ±1.5 (at ref freq)	11825 Hz to 12205 Hz		3	0
					11715 Hz to 12315 Hz	15		
					9000 Hz to 8000 Hz	60		
					8000 Hz to 1 Hz	60		
					15000 Hz to 200 kHz	60		
					200 kHz to 300 kHz	50		
					300 kHz to 1 MHz	35		

Part number: M18327/067-001.

SECTION 300

FILTERS AND CAPACITORS, RADIO FREQUENCY/ELECTROMAGNETIC INTERFERENCE SUPPRESSION (MIL-F-28861)

SECTION

SECTION 301

FILTERS AND CAPACITORS, RADIO FREQUENCY/ELECTROMAGNETIC INTERFERENCE BROADBAND TYPES

FILTERS AND CAPACITORS, RADIO FREQUENCY/ELECTROMAGNETIC INTERFERENCE SUPPRESSION, HERMETICALLY SEALED, STYLES FS11, FS12, AND FS14

Rated voltage: See table 301-I.

Rated current: 15 amperes.

Operating temperature range: -55°C to +125°C.

Temperature rise: 25°C, maximum.

Capacitance: See table 301-I.

Voltage and temperature limits of capacitance: +15, -40 percent.

Insulation resistance:

At +25°C: 1,000 megohms, minimum or, 1,000 megohm-microfarads minimum, whichever is less.

At +125°C: 100 megohms, minimum or, 100 megohm-microfarads minimum, whichever is less.

Insertion loss: See table 301-I.

Voltage drop: 0.12 V dc, maximum.

Product assurance level: B only.

Part number: M28861/01- (dash number from table 301-I) TB.

TABLE 301-I Electrical characteristics (MIL-F-28861/1).

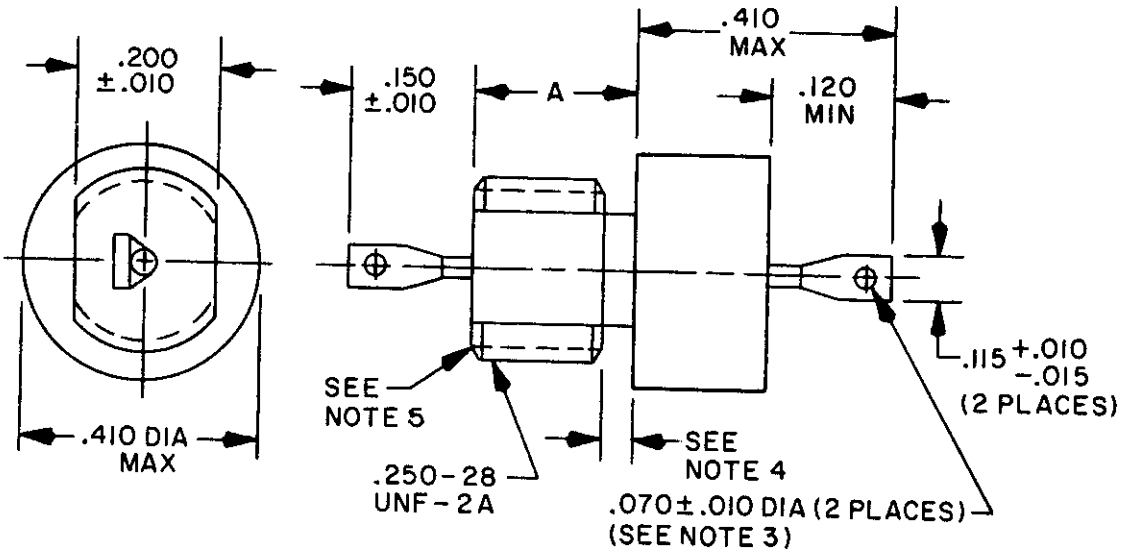
Dash number	Circuit	Rated voltage		Minimum capacitance (µF)	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/ 3/													
					At +25°C							At -55°C and +125°C						
		DC volts	AC 2/ volts		30 kHz	150 kHz	300 kHz	1 MHz	10 MHz	100 MHz	1 GHz	30 kHz	150 kHz	300 kHz	1 MHz	10 MHz	100 MHz	1 GHz
003, 013	L2	70	-	0.7	10	24	30	40	40	64	70	8	22	28	38	38	64	70
004, 014	C	70	-	0.7	10	24	30	40	40	64	70	8	22	28	38	38	64	70
005, 015	L2	100	-	0.45	6	19	25	36	40	60	70	4	17	23	34	38	60	70
006, 016	C	100	-	0.45	6	19	25	36	40	60	70	4	17	23	34	38	60	70
009, 019	L2	200	125	0.15	-	10	16	26	40	52	70	-	9	14	25	38	52	70
010, 020	C	200	125	0.15	-	10	16	26	40	52	70	-	9	14	25	38	52	70

1/ Insertion loss measurements shall be made under full load over the frequency range of 150 kHz to 10 MHz. Insertion loss measurements above or below this frequency range shall be made under no load.

2/ 0 to 400 Hz.

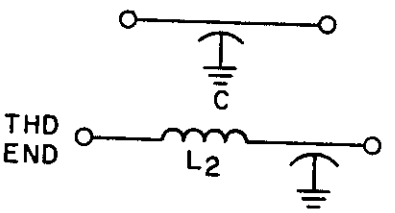
3/ The insertion loss requirements between any two adjacent specified frequencies shall be that of the lower of the two frequencies in order to accommodate resonant dips.

FILTERS AND CAPACITORS, RADIO FREQUENCY/ELECTROMAGNETIC INTERFERENCE SUPPRESSION, HERMETICALLY SEALED, STYLES FS11, FS12, AND FS14



Dash no.	A dimension (±.010)
003 thru 006, 009, 010	.187
013 thru 016, 019, 020	.312

Inches	mm
.010	0.25
.015	0.38
.035	0.89
.050	1.27
.115	2.92
.120	3.05
.150	3.81
.187	4.75
.200	5.08
.250	6.35
.312	7.92
.410	10.41



CIRCUIT DIAGRAMS

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Optional slot may be supplied, .050 ±.010 inches x .070 ±.010 inches.
4. Imperfect thread or undercut optional .050 inches maximum.
5. One imperfect thread allowed .035 inches maximum.

FIGURE 301.1. Case dimensions and circuit diagrams.

FILTERS, RADIO FREQUENCY/ELECTROMAGNETIC INTERFERENCE

SUPPRESSION, HERMETICALLY SEALED, STYLE FS20

Rated voltage: 100 V dc.

Rated current: See table 301-II.

Operating temperature range: -55°C to +125°C.

Temperature rise: 25°C maximum.

Capacitance: See table 301-II.

Voltage and temperature limits of capacitance: +15, -40 percent.

Insulation resistance:

At +25°C: 1,000 megohms, minimum or, 1,000 megohm-microfarads minimum, whichever is less.
At +125°C: 100 megohms, minimum or, 100 megohm-microfarads minimum, whichever is less.

Insertion loss: See table 301-II.

Volt drop: See table 301-II.

Product assurance level: B only.

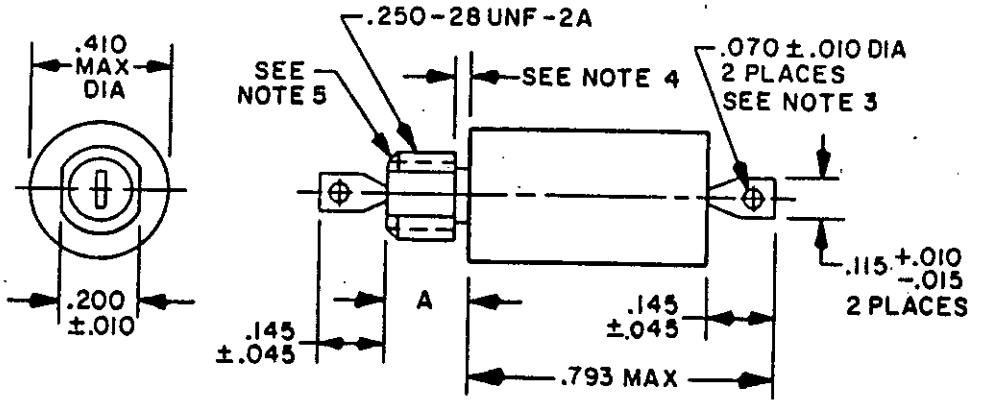
Part number: M28861/02- (dash number from table 301-II) TB.

TABLE 301-II Electrical characteristics (M28861/02).

Dash number	Circuit	Maximum current amperes	Minimum capacitance (µF)	Maximum voltage drop (volts)	Maximum DC resistance (ohms)	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/ 2/												
						At +25°C							At -55°C and +125°C					
						100 kHz	150 kHz	300 kHz	1 MHz	10 MHz	100 MHz	1 GHz	100 kHz	150 kHz	300 kHz	1 MHz	10 MHz	100 MHz	1 GHz
001,013	L1	0.25	0.45	0.375	1.5	30	38	50	60	60	50	70	28	35	48	58	50	50	70
002,014	L2	0.25	0.45	0.375	1.5	30	38	50	50	50	60	70	28	36	48	58	60	60	70
003,015	pi	0.25	0.90	0.375	1.5	54	64	80	80	80	80	80	52	62	78	78	80	80	80
004,016	L1	1.0	0.45	0.250	0.25	15	23	34	55	60	60	70	13	21	32	53	50	60	70
005,017	L2	1.0	0.45	0.250	0.25	15	23	34	55	60	60	70	13	21	32	53	50	60	70
006,018	pi	1.0	0.90	0.250	0.25	40	52	70	80	80	80	80	38	50	68	78	90	80	80
007,019	L1	3.0	0.45	0.150	0.05	14	18	27	45	50	60	70	12	16	25	43	60	60	70
008,020	L2	3.0	0.45	0.150	0.05	14	18	27	45	60	60	70	12	16	25	43	60	60	70
009,021	pi	3.0	0.90	0.150	0.05	-	25	51	80	80	80	80	-	23	49	78	80	80	80
010,022	L1	5.0	0.45	0.075	0.015	14	17	24	36	60	60	70	12	15	22	34	60	60	70
011,023	L2	5.0	0.45	0.075	0.015	14	17	24	36	60	60	70	12	15	22	34	60	60	70
012,024	pi	5.0	0.90	0.075	0.015	-	-	38	75	80	80	80	-	-	36	73	80	80	80

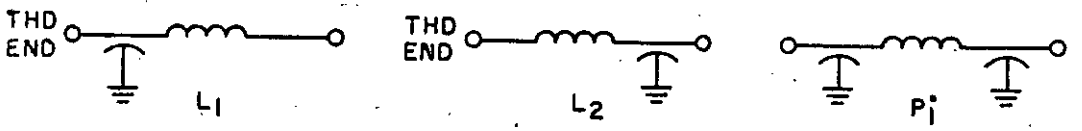
1/ Insertion loss measurements shall be made under full-load over the frequency range of 100 kHz to 10 MHz. Insertion loss measurements above this frequency range shall be under no-load.
2/ The insertion loss requirements between any two adjacent specified frequencies shall be that of the lower of the two frequencies in order to accommodate resonant dips.

FILTERS, RADIO FREQUENCY/ELECTROMAGNETIC INTERFERENCE SUPPRESSION, HERETICALLY SEALED, STYLE FS20



Dash no.	A dimension (±.010)
001 THRU 012	.187
013 THRU 024	.312

Inches	mm
.010	0.25
.015	0.38
.035	0.89
.045	1.14
.050	1.27
.070	1.78
.115	2.92
.145	3.68
.187	4.75
.200	5.08
.250	6.35
.312	7.92
.410	10.41
.793	20.14



CIRCUIT DIAGRAMS

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Optional slot may be supplied, .050 ±.010 inches x .070 ±.010 inches.
4. Imperfect thread or undercut optional .050 inches maximum.
5. One imperfect thread allowed .035 inch maximum.

FIGURE 301-2. Case dimensions and circuit diagrams.

FILTERS, RADIO FREQUENCY/ELECTROMAGNETIC INTERFERENCE
SUPPRESSION, HERMETICALLY SEALED, STYLE FS40

Rated voltage: 70 V dc.

Rated current: See table 301-III.

Operating temperature range: -55°C to +125°C.

Temperature rise: 25°C maximum.

Capacitance: See table 301-III.

Voltage and temperature limits of capacitance: +15, -40 percent.

Insulation resistance:

At +25°C: 1,000 megohms, minimum or, 1,000 megohm-microfarads minimum, whichever is less.
At +125°C: 100 megohms minimum or 100 megohm-microfarads minimum, whichever is less.

Insertion loss: See table 301-III.

Voltage drop: See table 301-III.

Product assurance level: B only.

Part number: M28861/04- (dash number from table 301-III) TB.

TABLE 301-III Electrical characteristics (M28861/04).

Dash number	Circuit	Maximum current (amperes)	Minimum capacitance (µF)	Maximum voltage drop (volts)	Maximum dc resistance (ohms)	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/ 2/																			
						At +25°C										At -55°C and +125°C									
						15 kHz	30 kHz	50 kHz	100 kHz	150 kHz	300 kHz	1 MHz	10 MHz	100 MHz	1 GHz	15 kHz	30 kHz	50 kHz	100 MHz	150 MHz	300 MHz	1 GHz	10 MHz	100 MHz	1 GHz
001, 019	L1	0.10	0.70	0.17	1.7	9	20	29	41	48	60	70	70	70	70	7	18	27	39	46	58	68	70	70	70
002, 020	L2	0.10	0.70	0.17	1.7	9	20	29	41	48	60	70	70	70	70	7	18	27	39	45	58	68	70	70	70
003, 021	pi	0.10	1.4	0.17	1.7	15	36	50	69	79	80	80	80	80	80	13	34	48	67	77	78	78	80	80	80
004, 022	L1	0.30	0.70	0.23	0.77	6	15	23	35	42	54	70	70	70	70	4	13	21	33	40	58	63	70	70	70
005, 023	L2	0.30	0.70	0.23	0.77	6	15	23	35	42	54	70	70	70	70	4	13	21	33	40	68	68	70	70	70
006, 024	pi	0.30	1.4	0.23	0.77	---	29	44	62	73	80	80	90	80	90	-	27	42	60	71	78	78	90	90	90
007, 025	L1	0.50	0.70	0.18	0.36	5	12	19	29	36	48	59	70	70	70	3	10	17	27	34	46	67	70	70	70
008, 026	L2	0.50	0.70	0.18	0.36	5	12	19	29	36	48	59	70	70	70	3	10	17	27	34	45	57	70	70	70
009, 027	pi	0.50	1.4	0.18	0.36	---	21	37	56	67	80	80	80	80	80	-	19	35	54	65	78	78	80	80	80

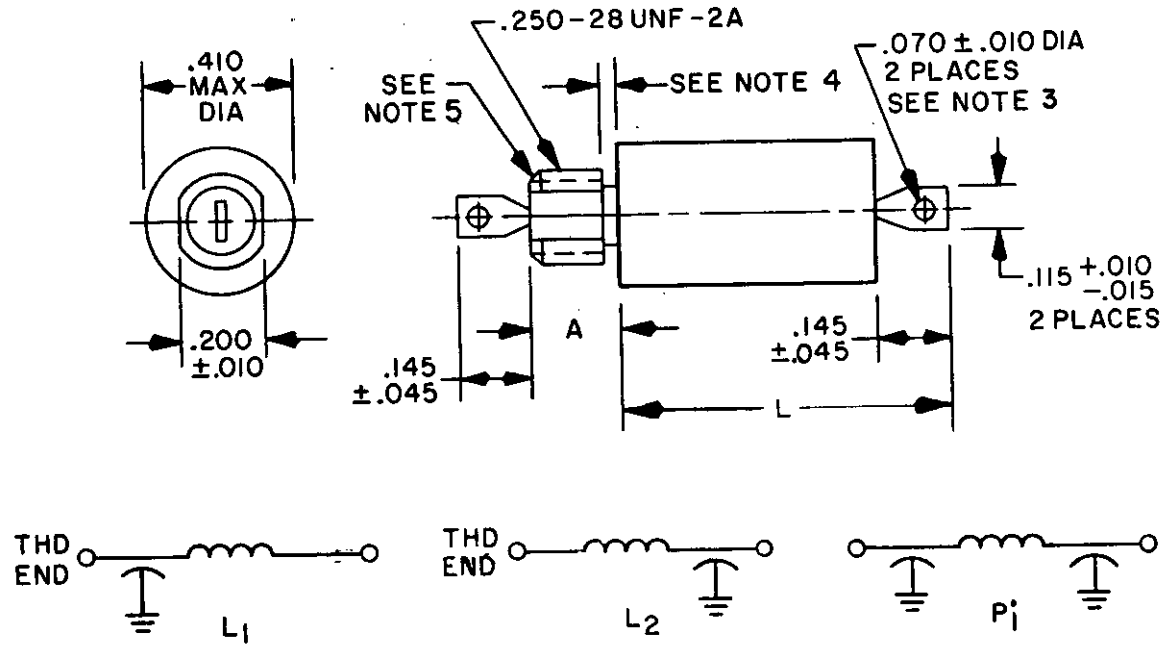
See footnotes at end of table.

TABLE 301-III Electrical characteristics (M28861/04) - Continued.

Dash number	Circuit	Maximum current (amperes)	Minimum capacitance (μF)	Maximum voltage drop (volts)	Maximum DC resistance (ohms)	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/ 2/																			
						At +25°C										At -55°C and +125°C									
						15 kHz	30 kHz	50 kHz	100 kHz	150 kHz	300 kHz	1 MHz	10 MHz	100 MHz	1 GHz	15 kHz	30 kHz	50 kHz	100 MHz	150 MHz	300 MHz	1 GHz	10 MHz	100 MHz	1 GHz
010, 028	L1	1.0	0.70	0.14	0.14	5	11	15	21	26	36	55	70	70	70	3	9	13	19	24	34	53	70	70	70
011, 029	L2	1.0	0.70	0.14	0.14	5	11	15	21	26	36	55	70	70	70	3	9	13	19	24	34	53	70	70	70
012, 030	pi	1.0	1.4	0.14	0.14	---	---	20	46	57	75	80	80	80	80	---	---	18	44	55	73	78	80	80	80
013, 031	L1	3.0	0.70	0.15	0.05	5	10	14	20	24	31	45	70	70	70	3	8	12	18	22	29	43	70	70	70
014, 032	L2	3.0	0.70	0.15	0.05	5	10	14	20	24	31	45	70	70	70	3	8	12	18	22	29	43	70	70	70
015, 033	pi	3.0	1.4	0.15	0.05	---	---	---	17	36	51	80	80	80	80	---	---	---	15	34	49	78	80	80	80
016, 034	L1	5.0	0.70	0.075	0.015	---	---	---	14	17	24	36	60	70	70	---	---	---	12	15	22	34	60	70	70
017, 035	L2	5.0	0.70	0.075	0.015	---	---	---	14	17	24	36	60	70	70	---	---	---	12	15	22	34	60	70	70
018, 036	pi	5.0	1.4	0.075	0.015	---	---	---	---	16	38	75	80	80	80	---	---	---	---	14	36	73	80	80	80

1/ Insertion loss measurements shall be made under full-load over the frequency range of 100 kHz to 10 MHz. Insertion loss measurements above and below this frequency range shall be under no-load.

2/ The insertion loss requirements between any two adjacent specified frequencies shall be that of the lower of the two frequencies in order to accommodate resonant dips.



CIRCUIT DIAGRAMS

Dash number	A dim	L dimension max	Dash number	A dim	L dimension max
001	.187 ±.010	.630	019	.312 ±.010	.630
002	"	.630	020	"	.630
003	"	.730	021	"	.730
004	"	.630	022	"	.630
005	"	.630	023	"	.630
006	"	.730	024	"	.730
007	"	.630	025	"	.630
008	"	.630	026	"	.630
009	"	.730	027	"	.730
010	"	.630	028	"	.630
011	"	.630	029	"	.630
012	"	.730	030	"	.730
013	"	.630	031	"	.630
014	"	.630	032	"	.630
015	"	.730	033	"	.730
016	"	.630	034	"	.630
017	"	.630	035	"	.630
018	"	.730	036	"	.730

Inches	mm
.010	0.25
.015	0.38
.035	0.89
.045	1.14
.050	1.27
.070	1.78
.115	2.92
.145	3.68
.187	4.75
.200	5.08
.250	6.35
.312	7.92
.410	10.41
.630	16.00
.730	18.54

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Optional slot may be supplied, .050 ±.010 inches x .070 ±.010 inches.
4. Imperfect thread or undercut optional .050 inches maximum.
5. One imperfect thread allowed .035 inches maximum.

FIGURE 301.3. Case dimensions and circuit diagrams.

FILTERS, RADIO FREQUENCY/ELECTROMAGNETIC INTERFERENCE

SUPPRESSION, HERMETICALLY SEALED, STYLE FS50

Rated voltage: 200 V dc/125 V ac.

Rated current: See table 301-IV.

Operating temperature range: -55°C to +125°C.

Temperature rise: 25°C maximum.

Capacitance: See table 301-IV.

Voltage and temperature limits of capacitance: +15, -40 percent.

Insulation resistance:

At +25°C: 1,000 megohms, minimum or, 1,000 megohm-microfarads minimum, whichever is less.
At +125°C: 100 megohms minimum or, 100 megohm-microfarads minimum, whichever is less.

Insertion loss: See table 301-IV.

Voltage drop: See table 301-IV.

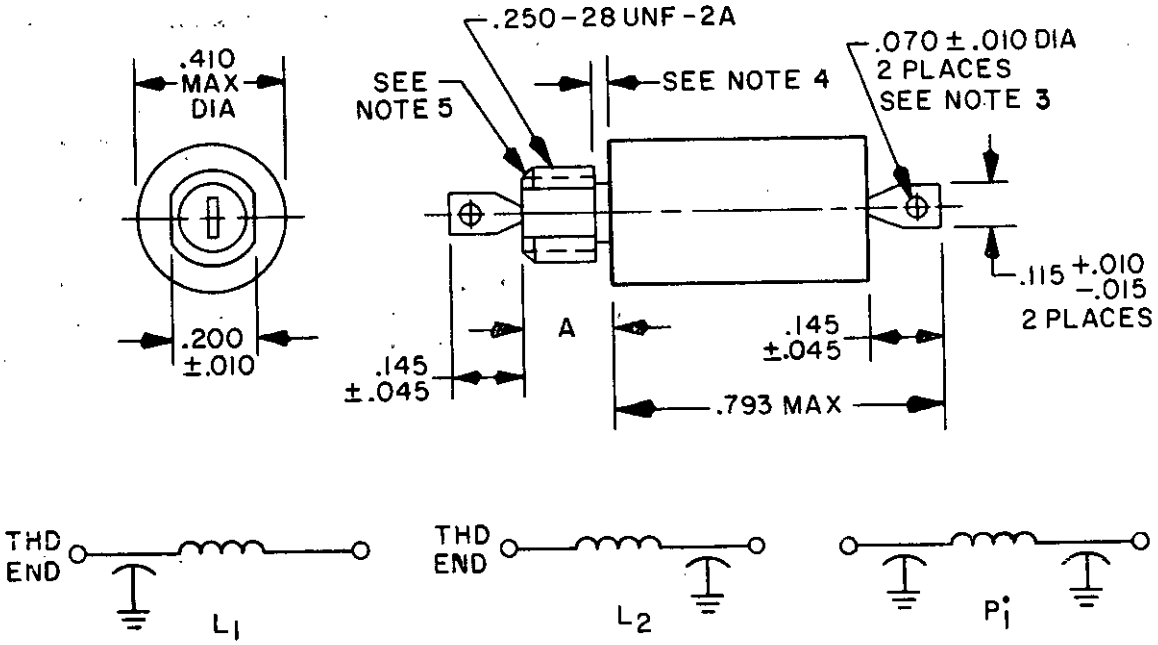
Product assurance level: B only.

Part number: M28861/05- (dash number from table 301-IV) TB.

TABLE 301-IV Electrical characteristics (M28861/05).

Dash number	Circuit	Maximum current amperes	Capacitance (µF) +100% -0	Maximum voltage drop (volts)	Maximum dc resistance (ohms)	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/ 2/												
						At +25°C							At -55°C and +125°C					
						100 kHz	150 kHz	300 kHz	1 MHz	10 MHz	100 MHz	1 GHz	100 kHz	150 kHz	300 kHz	1 MHz	10 MHz	100 MHz	1 GHz
001,013	L1	0.25	0.15	0.375	1.5	22	28	40	60	50	50	70	20	25	38	58	60	50	70
002,014	L2	0.25	0.15	0.375	1.5	22	28	40	60	60	60	70	20	26	39	58	60	60	70
003,015	pi	0.25	0.30	0.375	1.5	34	44	62	80	80	80	80	32	42	60	78	80	80	80
004,016	L1	1.0	0.15	0.250	0.25	8	13	24	45	60	60	70	6	11	22	43	60	60	70
005,017	L2	1.0	0.15	0.250	0.25	8	13	24	45	60	60	70	6	11	22	43	60	60	70
006,018	pi	1.0	0.30	0.250	0.25	18	32	50	80	80	80	80	16	30	48	78	80	80	80
007,019	L1	3.0	0.15	0.150	0.05	5	8	15	30	60	60	70	3	6	14	28	58	60	70
008,020	L2	3.0	0.15	0.150	0.05	5	8	16	30	60	60	70	3	6	14	28	58	60	70
009,021	pi	3.0	0.30	0.150	0.05	-	-	19	59	80	90	90	-	-	17	57	80	80	80
010,022	L1	5.0	0.15	0.075	0.015	5	8	14	26	55	55	70	3	6	12	24	53	55	70
011,023	L2	5.0	0.15	0.075	0.015	5	8	14	26	55	55	70	3	6	12	24	53	55	70
012,024	pi	5.0	0.30	0.075	0.015	-	-	-	51	80	80	80	-	-	-	49	80	90	80

1/ Insertion loss measurements shall be made under full-load over the frequency range of 100 kHz to 10 MHz. Insertion loss measurements above this frequency range shall be under no-load.
2/ The insertion loss requirements between any two adjacent specified frequencies shall be that of the lower of the two frequencies in order to accommodate resonant dips.



CIRCUIT DIAGRAMS

Inches	mm
.010	0.25
.015	0.38
.035	0.89
.045	1.14
.050	1.27
.070	1.78
.115	2.92
.145	3.68
.187	4.75
.200	5.08
.250	6.35
.312	7.92
.410	10.41
.793	20.14

Dash no.	A dimension (±.010)
001 THRU 012	.187
013 THRU 024	.312

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Optional slot may be supplied, .050 ±.010 inches x .070 ±.010 inches.
4. Imperfect thread or undercut optional .050 inches maximum.
5. One imperfect thread allowed .035 inches maximum.

FIGURE 301.4. Case dimensions and circuit diagrams.

INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge *(DO NOT STAPLE)*, and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document*(s)* or to amend contractual requirements.

(Fold along this line)

(Fold along this line)

DEPARTMENT OF THE NAVY

SPAWAR
Washington, DC 20363-5100

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 12503 WASHINGTON D. C.
POSTAGE WILL BE PAID BY THE DEPARTMENT OF THE NAVY

COMMANDER
SPACE AND NAVAL WARFARE SYSTEMS COMMAND SPAWAR
ATTN CODE 003 1212
WASHINGTON DC 20363 5100

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions – Reverse Side)

1. DOCUMENT NUMBER	2. DOCUMENT TITLE
MIL-STD-1395	FILTERS AND NETWORKS, SELECTION AND USE OF

3a. NAME OF SUBMITTING ORGANIZATION	4. TYPE OF ORGANIZATION *(Mark one)*
	☐ VENDOR ☐ USER ☐ MANUFACTURER ☐ OTHER *(Specify)*: _____
b. ADDRESS *(Street, City, State, ZIP Code)*	

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI)* – Optional	b. WORK TELEPHONE NUMBER *(Include Area Code)* – Optional
c. MAILING ADDRESS *(Street, City, State, ZIP Code)* – Optional	8. DATE OF SUBMISSION *(YYMMDD)*

(TO DETACH THIS FORM, CUT ALONG THIS LINE.)

DD FORM 82 MAR 1426 PREVIOUS EDITION IS OBSOLETE.