

INCH-POUND

MIL-PRF-23419/4G

21 June 2005

SUPERSEDING

MIL-PRF-23419/4F

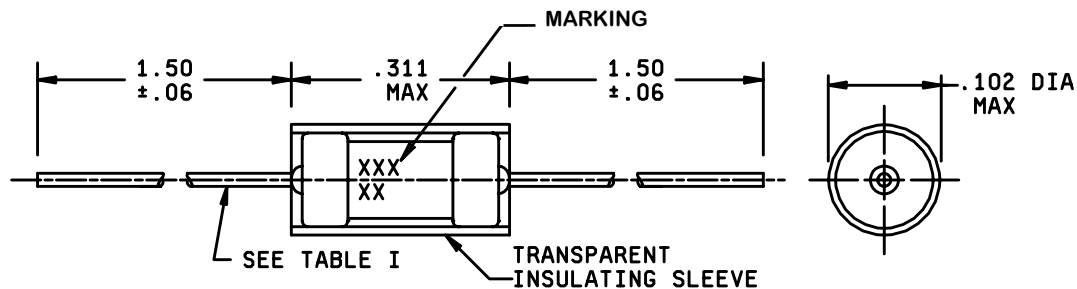
17 August 1989

PERFORMANCE SPECIFICATION SHEET

FUSES, CARTRIDGE, INSTRUMENT TYPE,
STYLE FM04, (NONINDICATING)

This specification is approved for use by all Departments
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein
shall consist of this specification and MIL-PRF-23419.



<u>Inches</u>	<u>mm</u>
.06	1.52
.103	2.62
.311	7.90
1.50	38.1

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.

FIGURE 1. Style FM04 fuses.

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REQUIREMENTS:

Interface and physical dimensions: See figure 1.

Applicable fuseholder: Grayhill type 2-42, miniature test clip (or equivalent). For 7 Ampere (A), 10A, and 15A fuses, use Grayhill pushpost number 29YY2126-0 or equivalent.

Case material: Ceramic or glass.

Terminals:

Materials: Caps, 90/10, commercial bronze; leads, copper.

Finish: Caps, silver or bright alloy plate; leads solder coated.

Strength: 5 pounds along terminal axis.

Current rating: See table I.

Characteristic: See table I.

Voltage rating: See table I.

Current carrying capacity: 100 percent at +25°C; 110 percent at -55°C; 80 percent at +125°C. The temperature of the case, body, or terminals shall, at no point, rise more than +70°C above the ambient air temperature. The maximum temperature rise for 10A and 15A fuses shall be +85°C.

Resistance: See table I. Cold resistance is measured at 10 percent or less of rated current.

Overload interrupt: Percentage of nominal rating, interrupt time -55°C through +125°C, 200 percent in 0 second to 5 seconds; 300 percent in 0 second to 0.1 second. Interrupt time for 15A fuses shall be 10 seconds maximum at 200 percent of rated current and .3 second maximum at 300 percent of rated current.

Short circuit interrupt: 300 amperes at maximum voltage dc.

Shock: Method I of MIL-PRF-23419.

Thermal shock: Method 107, MIL-STD-202, test condition B.

Extent of qualification: Qualification may be extended to style FM04 fuses to those qualified for style FM08 fuses. Group C inspection and retention of qualification may be extended from MIL-PRF-23419/8, provided they are all the same design and construction.

Solderability: Fuses shall be tested in accordance with MIL-PRF-23419. Gold plated leads shall have the gold removed by single or double dipping into a flowing or nonflowing hot solder of sufficient volume to assure complete gold removal.

Resistance to soldering heat: Fuses shall be tested in accordance with MIL-PRF-23419.

Marking: Fuses shall be marked with the manufacturer's name or trademark and current rating only.

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TABLE I. Style FM04 Type designation, electrical parameters, and lead dimensions.

Type designation			Maximum Cold resistance (ohms)	Lead diameter	
Characteristic	Maximum voltage	Current rating (amperes)		Inches (± 0.002)	mm (± 0.05)
A	125V	1/16A	9.100	.025	.64
A	125V	1/8A	2.700	.025	.64
A	125V	1/4A	.960	.025	.64
A	125V	3/8A	.560	.025	.64
A	125V	1/2A	.365	.025	.64
A	125V	3/4A	.215	.025	.64
A	125V	1A	.165	.025	.64
A	125V	1 1/2A	.105	.025	.64
A	125V	2A	.072	.025	.64
A	125V	3A	.047	.025	.64
A	125V	4A	.029	.025	.64
A	125V	5A	.019	.025	.64
A	125V	7A	.013	.025	.64
A	125V	10A	.008	.025	.64
A	32V	15A	.0053	.032	.82

Qualification and group C Inspection:

Inspection routine. The number of group II samples for qualification, and subgroup 2 samples for group C inspection, shall be as shown in table II below:

Table II. Group II and subgroup 2 samples.

Inspection	Number of sample fuses
Group II and subgroup 2	16
Terminal strength	4
Overload interrupt	
200% at -55° C	4
200% at +125° C	4
300% at -55° C	4
300% at +125° C	4

The number of group III samples for qualification, and subgroup 1 for group C inspection, shall consist of four fuses of each of the types shown in table III. Short circuit interrupt tests shall be conducted at the direct current voltage indicated, and the fuses shall be capable of withstanding a minimum short circuit current as shown in table III.

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TABLE III. Short circuit tests.

Fuse type	Current rating	Short circuit current	DC voltage
FM04	10A	300A	125
FM04	15A	300A	32

Supersession data: See table IV.

TABLE IV. Supersession data.

Superseding type designation	Superseded numbers in accordance with MIL-PRF-23419/4B	Superseded numbers in accordance with MIL-PRF-23419/4A
FM04A125V1/16A		
FM04A125V1/8A	FM04125V1/8A	FM04-125V-1/8A
FM04A125V1/4A	FM04125V1/4A	FM04-125V-1/4A
FM04A125V3/8A	FM04125V3/8A	FM04-125V-3/8A
FM04A125V1/2A	FM04125V1/2A	FM04-125V-1/2A
FM04A125V3/4A	FM04125V3/4A	FM0-125V-3/4A
FM04A125V1A	FM04125V1A	FM04-125V-1A
FM04A125V1-1/2A	FM04125V1-1/2A	FM04-125V-1-1/2A
FM04A125V2A	FM04125V2A	FM04-125V-2A
FM04A125V3A	FM04125V3A	FM04-125V-3A
FM04A125V4A	FM04125V4A	FM04-125V-4A
FM04A125V5A		FM04-125V-5A
FM04A125V7A		
FM04A125V10A		
FM04A32V15A		

- * Referenced documents. In addition to MIL-PRF-23419, this document references the following:

MIL-STD-202

- * The margins of this specification are marked with asterisks to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

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Custodians:

Army - CR

Navy - EC

* Air Force - 11

DLA - CC

Preparing activity:

DLA - CC

(Project 5920-0850)

Review activities:

* Army - AR, AT, CR4, MI

Navy - AS, MC, OS, SH

Air Force - 19, 99

* NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.