

INCH-POUND
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MIL-PRF-55182H  
SUPPLEMENT 1A  
22 March 2007  
SUPERSEDING  
SUPPLEMENT 1  
26 September 2002

## PERFORMANCE SPECIFICATION

### RESISTORS, FIXED, FILM, NONESTABLISHED RELIABILITY, ESTABLISHED RELIABILITY, AND SPACE LEVEL, GENERAL SPECIFICATION FOR

This supplement forms a part of [MIL-PRF-55182H](#), dated 26 September 2002.

## PERFORMANCE SPECIFICATIONS

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|---|---|
| <a href="#">MIL-PRF-55182/1</a>           | - Resistors, Fixed, Film, Non-Established Reliability, Established Reliability, and Space Level, Style RN*55. <u>1/</u> |
| <a href="#">MIL-PRF-55182/2</a> <u>2/</u> | - Resistors, Fixed, Film, Non-Established Reliability, Established Reliability, and Space Level, Style RN*57. <u>1/</u> |
| <a href="#">MIL-PRF-55182/3</a>           | - Resistors, Fixed, Film, Non-Established Reliability, Established Reliability, and Space Level, Style RN*60. <u>1/</u> |
| <a href="#">MIL-PRF-55182/5</a>           | - Resistors, Fixed, Film, Non-Established Reliability, Established Reliability, and Space Level, Style RN*65. <u>1/</u> |
| <a href="#">MIL-PRF-55182/6</a>           | - Resistors, Fixed, Film, Non-Established Reliability, Established Reliability, and Space Level, Style RN*70. <u>1/</u> |
| <a href="#">MIL-PRF-55182/7</a>           | - Resistors, Fixed, Film, Non-Established Reliability, Established Reliability, and Space Level, Style RN*50. <u>1/</u> |
| <a href="#">MIL-PRF-55182/9</a>           | - Resistors, Fixed, Film, Non-Established Reliability, Established Reliability, and Space Level, Style RN*90. <u>1/</u> |
| <a href="#">MIL-PRF-55182/10</a>          | - Resistors, Fixed, Film, Non-Established Reliability, Established Reliability, and Space Level, Style RN*75. <u>1/</u> |
| <a href="#">MIL-R-55182/11</a> <u>3/</u>  | - Resistors, Fixed, Film, Established Reliability, Style RN*51. <u>1/</u>   |
| <a href="#">MIL-R-55182/12</a> <u>3/</u>  | - Resistors, Fixed, Film, Established Reliability, Style RN*56. <u>1/</u>   |

1/ Third letter is variable, dependent upon lead material or capability.

2/ Inactive for new design after 8 July 1970.

3/ Inactive for new design after 19 November 1985.

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TABLE I. Performance characteristics.

Maximum resistance temperature characteristic (see 3.15):  Percent/°C Part/million/°C	C Hermetically sealed (see 3.12)	H Nonhermetically sealed (see 3.12.1 and 6.4)	E Hermetically sealed (see 3.12)	J Nonhermetically sealed (see 3.12.1 and 6.4)	K Nonhermetically sealed (see 3.12.1 and 6.4)
	±0.005 ±50	±0.005 ±50	±0.0025 ±25	±0.0025 ±25	±0.010 ±100
Maximum ambient temperature at rated wattage (see figure 2)	+125°C	+125°C	+125°C	+125°C	+125°C
Maximum ambient temperature at zero derating (see figure 2)	+175°C	+175°C	+175°C	+175°C	+175°C
Power rating in watts and maximum dc or rms voltage: <u>1/</u> <u>2/</u> Style RN*50 Style RN*55 Style RN*57 <u>4/</u> Style RN*60 Style RN*65 Style RN*70 Style RN*75	NA <u>3/</u> 1/10W, 200 V 1/8 W, 250V 1/8 W, 250 V 1/4 W, 300 V 1/2 W, 350 V 1.0 W, 750 V	1/20 W, 200 V 1/10W, 200 V NA <u>3/</u> 1/8 W, 250 V 1/4 W, 300 V 1/2 W, 350 V 1.0 W, 750 V	NA <u>3/</u> 1/10W, 200 V 1/8 W, 250V 1/8 W, 250 V 1/4 W, 300 V 1/2 W, 350 V 1.0 W, 750 V	1/20 W, 200 V 1/10W, 200 V NA <u>3/</u> 1/8 W, 250 V 1/4 W, 300 V 1/2 W, 350 V 1.0 W, 750 V	1/20 W, 200 V 1/10W, 200 V NA <u>3/</u> 1/8 W, 250 V 1/4 W, 300 V 1/2 W, 350 V 1.0 W, 750 V
Maximum percent change in resistance ±: <u>5/</u> Thermal shock (see 3.8) <u>6/</u> Overload (see 3.9) <u>6/</u>	0.2	0.2	0.2	0.2	0.2
Low temperature operation (see 3.16)	0.15	0.15	0.15	0.15	0.15
Low temperature storage (see 3.16)	0.15	0.15	0.15	0.15	0.15
Terminal strength (see 3.17)	0.2	0.2	0.2	0.2	0.2
Dielectric withstanding voltage (see 3.18)	0.15	0.15	0.15	0.15	0.15
Resistance to soldering heat (see 3.20)	0.1	0.1	0.1	0.1	0.1
Moisture resistance (see 3.21)	0.2	0.4	0.2	0.4	0.4
Shock, specified pulse (see 3.22)	0.2	0.2	0.2	0.2	0.2
Vibration, high frequency (see 3.23)	0.2	0.2	0.2	0.2	0.2
Life (see 3.24)	(see 3.24)	(see 3.24)	(see 3.24)	(see 3.24)	(see 3.24)
High temperature exposure (see 3.25)	2.0	2.0	2.0	2.0	2.0
Insulation resistance (see 3.19)	10,000 megohms minimum	10,000 megohms minimum	10,000 megohms minimum	10,000 megohms minimum	10,000 megohms minimum
Insulation resistance wet (see 3.19)	100 megohms minimum	100 megohms minimum	100 megohms minimum	100 megohms minimum	100 megohms minimum
Resistance tolerance ± percent (see table V)	1.0, 0.5, 0.1 as applicable (see 3.1)	1.0, 0.5, 0.1 as applicable (see 3.1)	1.0, 0.5, 0.1 as applicable (see 3.1)	1.0, 0.5, 0.1 as applicable (see 3.1)	1.0, 0.5

See footnotes at end of table.

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TABLE I. Performance characteristics - Continued.

Maximum resistance temperature characteristic (see 3.15):	T & Y Nonhermetically sealed (see 3.12.1 and 6.4)	S & Z Nonhermetically sealed (see 3.12.1 and 6.4)
Percent/°C	±0.0005	±0.0002
Part/million/°C	±5 <u>7/</u>	±2 <u>8/</u>
Maximum ambient temperature at rated wattage (see figure 2)	+125°C	+125°C
Maximum ambient temperature at zero derating (see figure 2)	+175°C	+175°C
Power rating in watts and maximum dc or rms voltage: <u>1/</u> <u>2/</u> Style RN*90	3/10 W, 300V	3/10 W, 300 V
Maximum percent change in resistance ±: <u>5/</u> <u>9/</u>		
Thermal shock (see 3.6 ) <u>6/</u>	0.05	0.05
Overload (see 3.7) <u>6/</u>		
Low temperature operation (see 3.8)	0.05	0.05
Low temperature storage (see 3.17)	0.05	0.05
Terminal strength (see 3.9)	0.02	0.02
Dielectric withstanding voltage (see 3.10)	0.02	0.02
Resistance to soldering heat (see 3.11)	0.02	0.02
Moisture resistance (see 3.12)	0.05	0.05
Shock, specified pulse (see 3.13)	0.01	0.01
Vibration, high frequency (see 3.14)	0.02	0.02
Life (see 3.15)	(see 3.15) <u>9/</u>	(see 3.15) <u>9/</u>
High temperature exposure (see 3.16)	0.5	0.5
Insulation resistance	10,000 megohms minimum	10,000 megohms minimum
Insulation resistance wet	100 megohms minimum	100 megohms minimum
Resistance tolerance ± percent (see table IV) <u>9/</u>	0.005, 0.01, 0.05, 0.1, 1.0, 0.5	0.005, 0.01, 0.05, 0.1, 1.0, 0.5

1/ Third letter is dependent upon lead material or capability.

2/ For +70°C power rating, see 3.1.

3/ NA: Not applicable.

4/ Inactive for new design.

5/ Where total resistance change is 1 percent or less, it shall be considered as +(\_\_ percent +0.01 ohm).

6/ Shall not exceed 0.2 percent (0.05 percent for RN\*90) for these two tests combined.

7/ Maximum resistance-temperature characteristic = ±5 ppm/°C (±0.0005 percent per degree C) up to and including +125°C and +10 ppm/°C (+.001 percent per degree C) from 125°C to 175°C.

8/ Maximum resistance-temperature characteristic = ±2 ppm/°C (±0.0002 percent per degree C) up to and including +175°C.

9/ Requirement paragraph numbers noted in parenthesis are reference to [MIL-PRF-55182/9](#).

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Custodians:

Army – CR  
Navy – EC  
Air Force – 11  
DLA - CC

Review activities:

Army – AR, EA  
Navy – AS, CG, MC, OS  
Air Force – 19, 99

Civil agencies:

NASA – NA

Preparing activity:

Army – CR

Agent:

DLA – CC

(Project 5905-2006-003)

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>