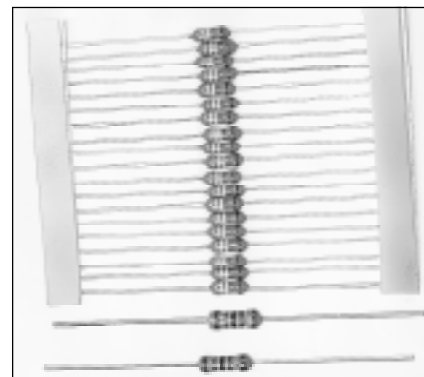


FEATURES

- MEETS OR EXCEEDS MIL-R-10509E SPECIFICATIONS
- ULTRA-LOW NOISE WITH LOW TEMPERATURE COEFFICIENTS
- CLOSE TOLERANCE, PRECISION APPLICATIONS
- EIA COLOR CODING RESISTANT TO INDUSTRIAL SOLVENTS
- AVAILABLE ON TAPE AND REEL FOR AUTOMATIC INSERTION AND BULK PACK FOR SMALL PRODUCTION RUNS OR PROTOTYPES
- ECONOMICALLY PRICED



STANDARD TYPES, RATINGS AND AVAILABILITY

Type	NMR16	NMR25	NMR50	NMR100
Power Rating at 70°C	0.125W	0.25W	0.5W	1W
Max. Working Voltage at 70°C*	150V	250V	350V	500V
Max. Overload Voltage at 70°C	300V	500V	700V	1000V
Resistance Tolerance	(F) $\pm 1\%$ (STD.)	(D) $\pm 0.5\%$ (OPT.) (F) $\pm 1.0\%$ (STD)	(F) $\pm 1\%$ (STD.)	(F) $\pm 1\%$ (STD.)
Temperature Coefficient	$\pm 50\text{ppm}/^\circ\text{C}$	10 Ω ~ 1Meg Ω		10 Ω ~ 1MegW
	$\pm 100\text{ppm}/^\circ\text{C}$	Less than 10 Ω , More than 1Meg Ω		Less than 10 Ω , More than 1Meg Ω
Resistance Value Availability	E96	E96	E96	E96

* Extended resistance range available on request

PERFORMANCE CHARACTERISTICS

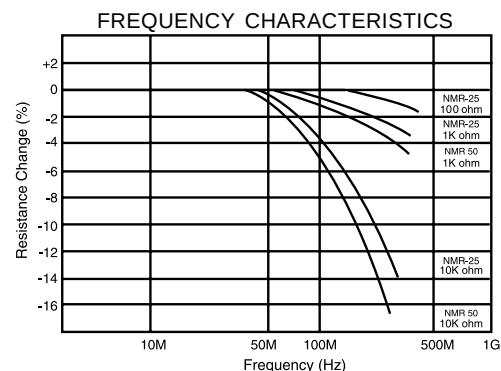
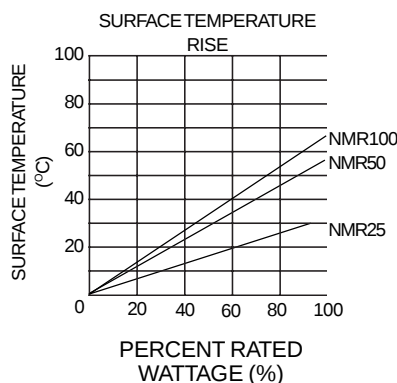
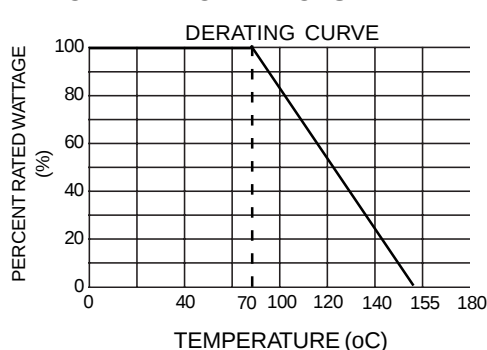
Requirements	Performance	Test Method MIL-R-10509F
Operating Temperature Range	-55 ~ +155°C	
Temperature Coefficient	$\pm 50, \pm 100\text{ppm}/^\circ\text{C}$	4.6.12
Temperature Cycling	$R \leq \pm(0.5\% + 0.05\Omega)$	4.6.6
Low Temperature Operation	$R \leq \pm(0.5\% + 0.05\Omega)$	4.6.5
Short Time Overload	$R \leq \pm(0.5\% + 0.05\Omega)$	4.6.6
Terminal Strength	$R \leq \pm(0.5\% + 0.05\Omega)$	4.6.7
Dielectric Withstanding Voltage	$R \leq \pm(0.5\% + 0.05\Omega)$	4.6.8
Insulation Resistance	10,000M Ω minimum	4.6.9
Soldering Effect	$R \leq \pm(0.5\% + 0.05\Omega)$	4.6.10
Moisture Resistance	$R \leq \pm(1\% + 0.05\Omega)$	(MIL-R-22684B, 4.6.10)
Load Life	$R \leq \pm(1\% + 0.05\Omega)$	4.6.13
Vibration	$R \leq \pm(0.5\% + 0.05\Omega)$	(MIL-R-2268B, 4.6.16)
Current Noise	0.2 $\mu\text{V}/\text{V}$ (-14dB)	(JIS C5202, 5.9 Method II)
Solvent Resist	MIL-STD-202, Method 215, Trichlorethylene, Trichloroethane Trichlorotrifluoroethane	

** - Maximum allowable continuous voltage (Vdc or rms) for all resistors is the lower of the two values: "MAXIMUM WORKING VOLTAGE" as specified

or

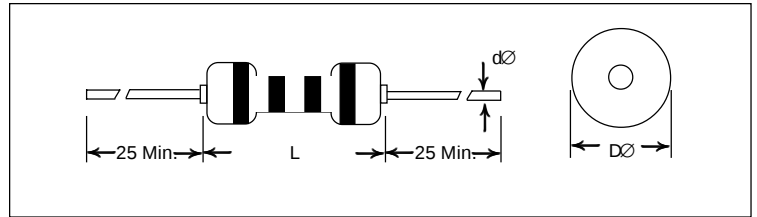
$\sqrt{\text{Power rating (WATTS x Resistance } (\Omega))}$

TYPICAL PERFORMANCES



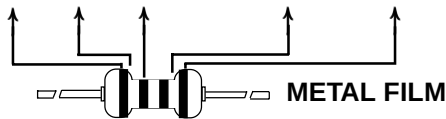
DIMENSIONS (mm)

Type	D $\varnothing$	L	d $\varnothing$ ± 0.05
NMR16	1.7 $\pm$ 0.2	3.7 $\pm$ 0.4	0.45
NMR25	2.4 $\pm$ 0.4	6.4 $\pm$ 0.5	0.60
NMR50	3.2 $\pm$ 0.5	9.5 $\pm$ 0.5	0.65
NMR100	4.5 $\pm$ 0.5	11.0 $\pm$ 1.0	0.80



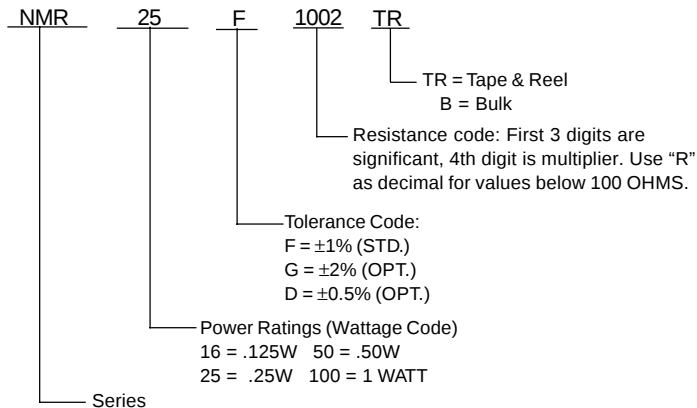
COLOR CODING

Color	Significant Figure			Multiplier	Tolerance
	1st	2nd	3rd		
Black	0	0	0	1	-
Brown	1	1	1	10	F ($\pm 1\%$)
Red	2	2	2	100	G ($\pm 2\%$)
Orange	3	3	3	1,000	-
Yellow	4	4	4	10,000	-
Green	5	5	5	100,000	D ($\pm 0.5\%$)
Blue	6	6	6	1,000,000	C ($\pm 0.25\%$)
Violet	7	7	7	10,000,000	B ($\pm 0.1\%$)
Grey	8	8	8	-	-
White	9	9	9	-	-
Gold	-	-	-	0.1	J ($\pm 5\%$)
Silver	-	-	-	0.01	K ($\pm 10\%$)



Significant Figures of Nominal Resistance Values (E-96 1% Tolerance)			
1.00	1.02	1.05	1.07
1.10	1.13	1.15	1.18
1.21	1.24	1.27	1.30
1.33	1.37	1.40	1.43
1.47	1.50	1.54	1.58
1.62	1.65	1.69	1.74
1.78	1.82	1.87	1.91
1.96	2.00	2.05	2.10
2.15	2.21	2.26	2.32
2.37	2.43	2.49	2.55
2.61	2.67	2.74	2.80
2.87	2.94	3.01	3.09
3.16	3.24	3.32	3.40
3.48	3.57	3.65	3.74
3.83	3.92	4.02	4.12
4.22	4.32	4.42	4.53
4.64	4.75	4.87	4.99
5.11	5.23	5.36	5.49
5.62	5.76	5.90	6.04
6.19	6.34	6.49	6.65
6.81	6.98	7.15	7.32
7.50	7.68	7.87	8.06
8.25	8.45	8.66	8.87
9.09	9.31	9.53	9.76

PART NUMBERING SYSTEM



PACKAGING

TAPE AND REEL - 5000 PIECES
 BULK - 1000 PIECES
 (5 BAGS OF 200 PER BAG)