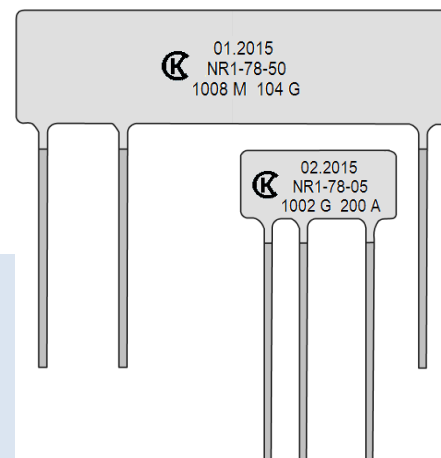


FEATURES

- 40000 V capability
- Ratio tolerance to 0.05 %

GENERAL SPECIFICATIONS

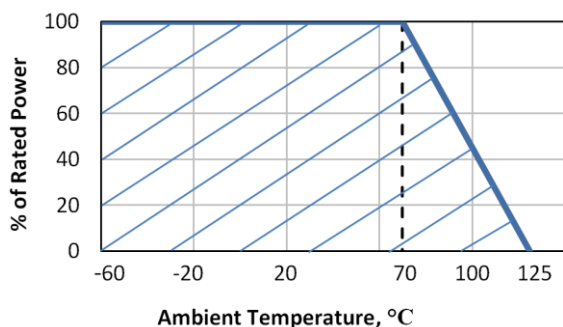
- **Operating Temp. Range:** -60 °C to 125 °C
- **Load Life 70 °C/ 1000 h:** 10 %
- **Max. Ratio Change at Rated Dissipation**
 - after 1000 h for 0.5 % ratio tol. 2 %
 - after 1000 h for <0.5 % ratio tol. 0.5
 - after 30000 h for 0.5 % ratio tol. 5 %
 - after 30000 h for <0.5 % ratio tol. 3 %
- **Package:** Leaded
- **Substrate Material:** 96 % Al₂O₃
- **Coating:** Epoxy
- **Termination Finish:** Sn-Pb



Part Number	Power (W)	Max. Working Voltage (V)	Resistance Total Value ¹ (Ohms)	Resistance Tolerance (± %)	Ratio	Ratio Tolerance (± %)	Ratio Temperature Coefficient (ppm/°C)
NR1-78-05	0.5	10000	10K, 100K	5, 2	20:1, 10:1	0.2, 0.1, 0.05	±(250, 100, 50) ²
			100K, 1M, 10M, 100M, 1G, 10G	20, 10	2K:1, 1K:1, 200:1, 100:1	0.5	±250
			1M, 10M, 100M, 1G, 10G	20	10K:1	0.5	±250
NR1-78-10	1	20000	10K, 100K	5, 2	20:1, 10:1	0.2, 0.1, 0.05	±(250, 100, 50) ²
			100K, 1M, 10M, 100M, 1G, 10G	20, 10	2K:1, 1K:1, 200:1, 100:1	0.5	±250
			1M, 10M, 100M, 1G, 10G	20	10K:1	0.5	±250
NR1-78-30	3	30000	10K, 100K	5, 2	20:1, 10:1	0.2, 0.1, 0.05	±(250, 100, 50) ²
			100K, 1M, 10M, 100M, 1G, 10G	20, 10	2K:1, 1K:1, 200:1, 100:1	0.5	±250
			1M, 10M, 100M, 1G, 10G	20	10K:1	0.5	±250
NR1-78-50	5	40000	10K, 100K, 1M, 10M, 100M, 1G, 10G	20, 10, 5	200:1, 100:1, 20:1, 10:1	0.5	±100
			100K, 1M, 10M, 100M, 1G, 10G	20, 10	2K:1, 1K:1	0.5	±250
			1M, 10M, 100M, 1G, 10G	20, 10	20K:1, 10K:1	0.5	±250
			10M, 100M, 1G, 10G	20	100K:1	0.5	±250

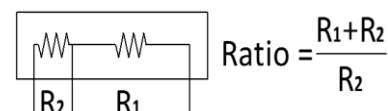
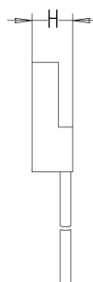
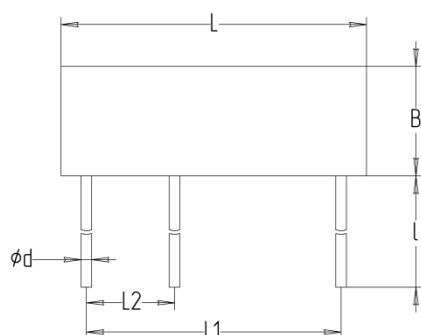
⁽¹⁾ >1M measured at 100 V

⁽²⁾ ±250 ppm/°C for ±0.2 % ratio tolerance; ±100 ppm/°C for ±0.1 % ratio tolerance; ±50 ppm/°C for ±0.05 % ratio tolerance



PART NUMBER CODE

NR1-78	05	1003	G	200	A
model	power	value	tolerance	ratio	ratio tolerance
	05 = 0.5 W	1002 = 10K	G = 2 %	100 = 10:1	A = 0.05 %
	10 = 1 W	1008 = 10G	J = 5 %	200 = 20:1	B = 0.1 %
	30 = 3 W		K = 10 %	104 = 100K:1	C = 0.2 %
	50 = 5 W		M = 20 %		D = 0.5 %



Part Number	Dimensions (mm)							Mass (g)
	L	B	H	L1	L2	l	Ød	
NR1-78-05	25 ⁺³	8 ⁺³	2.5±0.5	23.0±0.5	5.0±0.5	35±1	0.8±0.1	2.0
NR1-78-10	38 ⁺³	13 ⁺³	2.5±0.5	36.0±0.5	8.0±0.5	35±1	0.8±0.1	3.5
NR1-78-30	51 ⁺³	15 ⁺³	2.5±0.5	49.0±0.5	10.0±0.5	35±1	0.8±0.1	5.0
NR1-78-50	76 ⁺³	15 ⁺³	2.5±0.5	74.0±0.5	10.0±0.5	35±1	0.8±0.1	6.0

PERFORMANCE CHARACTERISTICS

Test	Condition	ΔR max.
Robustness of termination	IEC60115-1 (4.16)/ IEC 60068-2-21 Bending; Tensile	± 5 %
Solderability	IEC60115-1 (4.17)/ IEC 60068-2-20 (235±5) °C; 2 s; solder bath method; SnPb40	Good tinning (>95 % covered, no visible damage)
Resistance to soldering heat	IEC60115-1 (4.18.2)/ IEC 60068-2-20 (260±5) °C; (5±1) s	± 5 %; no visible damage
Rapid change of temperature	IEC60115-1 (4.19)/ IEC 60068-2-14 30 min at -60 °C; 30 min at 125 °C; 5 cycles	± 5 %
Vibration	IEC60115-1 (4.22)/ IEC 60068-2-6 34 sweep cycles per direction; 100 Hz to 2000 Hz; 50 m/s ²	± 5 %
Damp heat, steady state	IEC60115-1 (4.24)/ IEC 60068-2-78 (40±2) °C; 21 days; (93±3) % RH	± 20 %

All tests are carried out in accordance with the following specifications:

- IEC 60115-1 (clause),
- IEC 60068-2-xx (test method).

PACKAGING

Carton box.

MOUNTING PROCEDURE

Can be used only in manual assembly technique.

MARKING

Total Value	Marking	Ratio	Marking
10K	1002	10:1	100
100K	1003	20:1	201
1M	1004	100:1	101
10M	1005	1K:1	102
100M	1006	10K:1	103
1G	1007	100K:1	104
10G	1008		