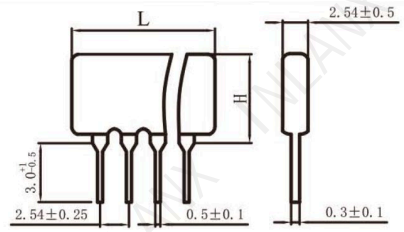
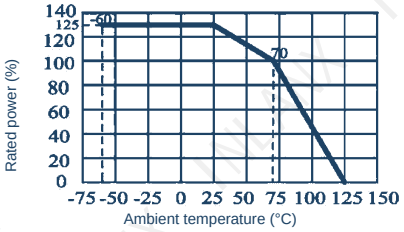
RN Film Fixed Resistor Networks

Outline Drawing



Derating Curve





Quality grade: triangle J mark, YC. Generic specification: GJB 920A-2002. YC detail specification: Q/QJA 20090/5-2019.

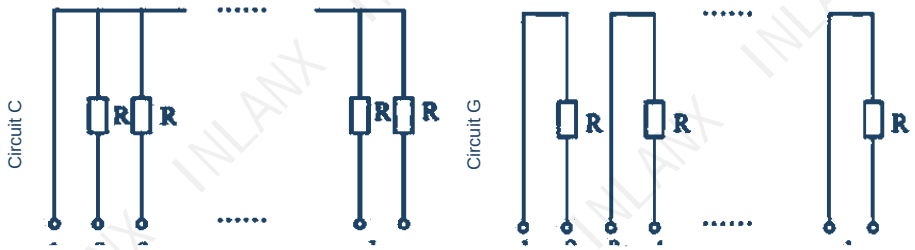
Dimensions, Power and Detail Specifications

Model	Lmax mm	H mm	Power W	Detail specification
RN1031	9.08	4.98±0.22	0.25	ZZR-Q/RU 20920.9-2012
RN1041	11.62	4.98±0.22	0.375	ZZR-Q/RU 20920.10-2012
RN1051	14.16	4.98±0.22	0.5	ZZR-Q/RU 20920.11-2012
RN1061	16.70	4.98±0.22	0.625	ZZR-Q/RU 20920.12-2012
RN1071	19.24	4.98±0.22	0.75	ZZR-Q/RU 20920.13-2012
RN1081	21.78	4.98±0.22	0.875	ZZR-Q/RU 20920.2A-2012
RN1091	24.32	4.98±0.22	1	ZZR(Z)-Q/RU 20920.1A-2010
RN1101	26.86	5.08 max	1.125	ZZR-Q/RU 20920.4-2006
RN1111	29.40	5.08 max	1.25	ZZR-Q/RU 20920.5-2006

Common Electrical Ratings

Model	Resistance	Tolerance	Limit V	TCR	Circuit
RN1031 ~ RN1111	10 Ω~1 MΩ	±1%, ±2%, ±5%	100 V	±300×10^-6/K	C / G

Circuit Diagrams



Main Inspection Items

Numerical criteria: ΔR≤±(listed value %R+0.01 Ω), except for TCR and textual requirements. UR: rated voltage; Umax: limiting voltage.

Item	Requirement	Test method
Temperature coefficient	M: ±300×10^-6/K	-55℃ to 125℃
Thermal shock	0.7	-65℃ to 125℃, 5 cycles
Low-temperature operation	0.5	-65℃, 2.5UR (≤2Umax), 45(+5/-0) min on, 15(+5/-0) min off
Short-time overload	0.5	2.5UR (≤2Umax), 5 s

RN Film Fixed Resistor Networks

Main Inspection Items (continued)

Item	Requirement	Test method
Termination strength	0.25	Any 3 terminals: pull 20 N, 30 s; bending ≥15°, 3 times
Resistance to soldering heat	0.25	260℃, 10 s
Moisture resistance	0.5	65℃, RH80% to 98%
Shock	0.25	100 m/s², terminal-peak sawtooth 2.96 m/s, 6 ms; 3 shocks in each of 6 directions on 3 perpendicular axes (18 total)
High-frequency vibration	0.25	10 to 2000 Hz, 0.75 mm/200 m/s², 12 h
Life	2.0	70℃, UR (≤Umax), 2000 h; 25℃, UR (≤Umax), 2000 h
High-temperature exposure	1.0	125℃, 100 h
Low-temperature storage	0.5	-65℃, 24 h
Power conditioning	0.7	UR (≤Umax), 100 h
Insulation resistance	≥10 GΩ	Normal atmospheric pressure, 100 VDC
Solderability	Solder coverage ≥95%	Steam ageing 1 h, 235℃, 5 s

Ordering Information

RN1051M5101FC

Model / Characteristic M / E24 or E96 nominal resistance (range in table) / F±1%, G±2%, J±5% / Circuit C or G