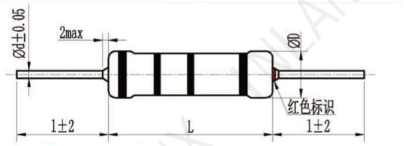
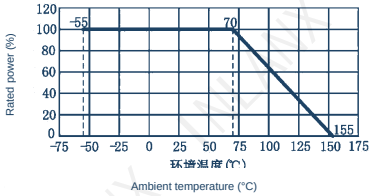
RI81 / RI81A High Ohm and High Voltage Glass Glaze Film Resistors

Outline Drawing



Derating Curve





YG and J quality grades; QB available. Detail specification Q/RU 270-2015; YG grade additionally QZJ 84061. Generic specification GB/T 5729-2003. Yellow marking indicates ±5% tolerance.

Outline Dimensions • mm

Model	Power W	L	l	ΦD	Φd
RI81 / RI81A	0.25	6.6±0.6	28	2.5±0.4	0.6
RI81 / RI81A	0.5	9.6±0.9	28	3.8±0.5	0.7
RI81	1	12.9±1.1	28	4.4±0.6	0.8
RI81	2	16.0±1.2	28	6.0±0.7	0.8
RI81	3	25.0±1.4	33	8.5±0.8	0.8

Electrical Specifications

Tolerance: 100 kΩ–100 MΩ ±1%, ±2%, ±5%, ±10%; 101–360 MΩ ±2%, ±5%, ±10%; >360 MΩ ±5%, ±10%.

Model	Power W	Resistance	Limit V	Withstand V	TCR ×10^-6/K
RI81 / RI81A	0.25	100 kΩ~200 MΩ	2k	500	±250
RI81 / RI81A	0.5	100 kΩ~360 MΩ	4k	700	±250
RI81	1	100 kΩ~360 MΩ	8k	1k	±250
RI81	2	100 kΩ~500 MΩ	8k	1k	±250
RI81	3	100 kΩ~500 MΩ	8k	1k	±250

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Main Inspection Items

Item	Requirement	Test method
Voltage withstand	No breakdown or flashover	V-block, 60±5 s, voltage per table
Solderability	Good solder flow and wetting	(235±5)°C, (2±0.5)s
Overload	ΔR≤±(0.5%R+0.05Ω)	2.5UR; max 3000 V at 0.25 W, 5000 V at 0.5 W, 10 kV at 1–3 W; 5 s
Lead strength	ΔR≤±(0.5%R+0.05Ω)	Pull 10 N at 0.25/0.5 W, 20 N others; bend twice, twist 180° twice
Vibration	ΔR≤±(0.5%R+0.05Ω)	10–500 Hz, min(0.75 mm, 98 m/s²), 6 h
Soldering-heat resistance	ΔR≤±(0.5%R+0.05Ω)	(350±10)°C, (3.5±0.5)s
Rapid temperature change	ΔR≤±(0.5%R+0.05Ω)	-55 to 155°C, 5 cycles
Damp heat, steady	ΔR≤±(2%R+0.1Ω)	(40±2)°C, RH(93±3)%, 56 d
Climatic sequence	ΔR≤±(2%R+0.1Ω)	High temp 155°C 16 h; cyclic damp heat, -55°C, 8.5 kPa
Electrical endurance	ΔR≤±(2%R+0.1Ω)	Room temp, min(1.2UR,Umax), 240 h
Upper-category endurance	ΔR≤±(2%R+0.1Ω)	U=0, 155°C, 1000 h
Flammability	After-flame time <10 s	Flame method 15 s, 5 times
Surge test	ΔR≤±20%R	0.25 W R>10 MΩ: 5 kV; 0.5 W R>1 MΩ and 1–3 W R>100 kΩ: 10 kV; 5 s period, 50 times

Ordering Information

RI81-0.5W-100kΩ-J

Model RI81 or RI81A / Power per table / Nominal resistance / F±1%, G±2%, J±5%, K±10%, subject to high-resistance tolerance limits above.