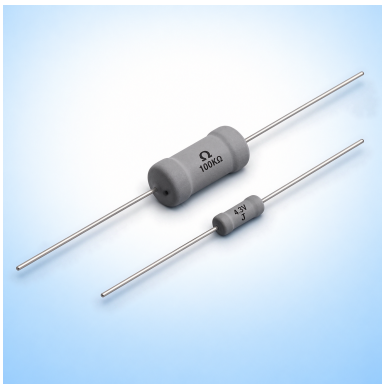
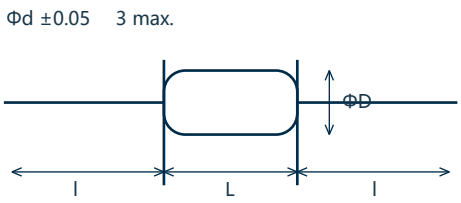
Metal Film Resistor Series

RJJ-6 / RJJ-7 · Precision



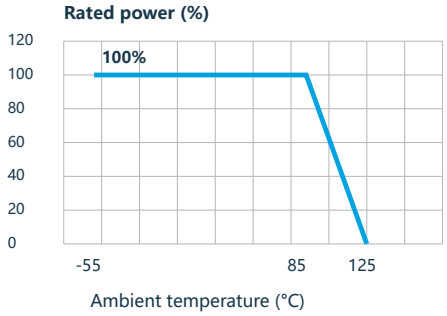
Series reference image; markings vary.

Outline / mm



Drawing not to scale

Power derating



01 Dimensions & electrical selection

Model	Power W	Resistance Ω	Tolerance %	Series	Limit voltage V[1]
RJJ-6	0.25	1k–1M	±0.1 / ±0.2	E192	250
RJJ-6	0.5	100–1M	±0.5 / ±1 / ±2	E192	350
RJJ-7	0.125	1k–750k	±0.1 / ±0.2	E192	200
RJJ-7	0.25	100–750k	±0.5 / ±1 / ±2	E192	250

Model	L / mm	ΦD / mm	Φd / mm	Lead length l / mm
RJJ-6	10.2±0.5	3.9±0.3	0.8	25±2
RJJ-7	8.0±0.5	2.6±0.3	0.6	25±2

TCR options: ±25, ±50, ±100 (source unit requires confirmation; see note 2).

02 Principal qualification tests

Test	Conditions / method	Requirements
Accelerated test	85±2°C; 1.5UR or Umax, whichever is lower; 96h	±0.1/0.2% grades: ΔR≤±0.1%R; ±0.5/1/2% grades: ΔR≤±1%R
Damp heat	40±2°C; RH90–95%; 96h	±0.1/0.2% grades: ΔR≤±0.1%R; ±0.5/1/2% grades: ΔR≤±1%R
Pulse load	100–20000Hz; 1μs; 30min; RJJ-6: 500PR; RJJ-7: 1000PR (100Ω–1kΩ: 500PR); average 0.2PR	±0.1/0.2%: ΔR≤±0.1%R; ±0.5%: ≤±0.5%R; ±1/2%: ≤±1%R
Temperature cycling	−55±3°C □ 125±3°C; 3 cycles	±0.1/0.2% grades: ΔR≤±0.1%R; ±0.5/1/2% grades: ΔR≤±1%R
Mechanical load	Vibration 10–2000Hz, 150m/s², 1h; bump 300m/s², 11ms, 18 times; constant acceleration 500m/s², 5min	±0.1/0.2%: ΔR≤±0.1%R; ±0.5/1/2%: ΔR≤±0.5%R
Terminal strength	Pull 10N; bend 5N, 90°; twist 180°, twice	Same as mechanical load
Solderability	235±5°C; 2±0.5s; immersion depth 1.5–2mm from body	Solder coverage ≥90%
Endurance	70±2°C; UR or Umax, whichever is lower; 1000h	ΔR≤±(0.25%R+0.05Ω)

03 Ordering & applicable specifications

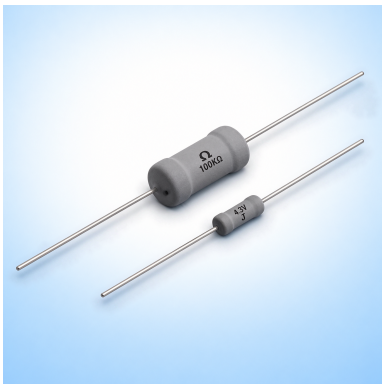
RJJ-7-0.125W-20kΩ-B | B ±0.1% • C ±0.2% • D ±0.5% • F ±1% • G ±2%

Quality grades: YG, QJB/K; QB available. YG: Q/RU 226-2014, GB/T 5729-2003, QZJ 840630. QJB/K: Q/RU 21929.12-2006, GJB 1929-1994.

1. The source heading reads “limit W” ; voltage is provisional and requires confirmation. 2. TCR exponents are unclear in all three source sheets. Values are retained; units require confirmation before release. Models are distinct; interchangeability is not implied.

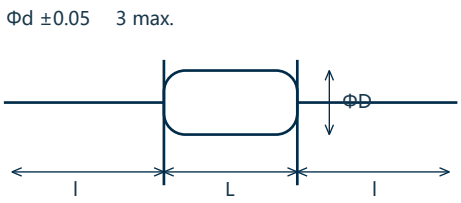
Metal Film Resistor Series

RJ71 / RJ77 · Precision



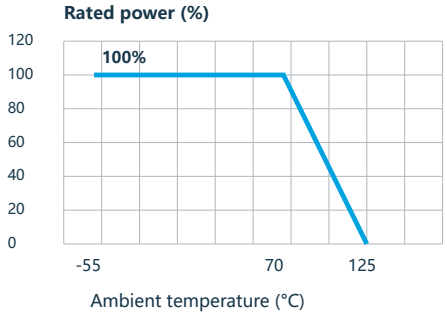
Series reference image; markings vary.

Outline / mm



Drawing not to scale

Power derating



01 Dimensions & electrical selection

Model / W	L / mm	ΦD / mm	Φd / mm	l / mm	Resistance	Series / limit V
RJ71 / 0.25	8.0±0.5	2.6±0.3	0.6	25±2	1Ω–750kΩ	E48/E96 / 250
RJ71 / 0.5	10.2±0.5	3.9±0.3	0.8	25±2	1Ω–1MΩ	E48/E96 / 350
RJ71 / 1	12.7±0.7	6.3±0.5	0.8	30±2	1Ω–1MΩ	E48/E96 / 500
RJ71 / 2	18.2±0.7	8.3±0.5	0.8	30±2	1Ω–5.1MΩ	E48/E96 / 750
RJ77 / 0.25	8.0±0.5	2.6±0.3	0.6	25±2	10Ω–6.19MΩ	E192 / 250

Model / resistance band	Tolerance	TCR values[1]
RJ71	±0.5% / ±1% / ±2%	±100 / ±200
RJ77 / 10–612Ω	±0.5% / ±1% / ±2%	±25 / ±50 / ±100 / ±200
RJ77 / 612Ω–612kΩ	±0.1% / ±0.2%	±25 / ±50 / ±100 / ±200
RJ77 / 612kΩ–6.19MΩ	±0.5% / ±1% / ±2%	±25 / ±50 / ±100 / ±200

02 Principal qualification tests

Test	Conditions / method	Requirements
Pulse load	P=500PR; average P=50%PR; 5μs, 30min; RJ71 R<10Ω excluded	RJ71: by tolerance grade; RJ77: change/tolerance≤1[2]
Accelerated test	70±2°C; 1.5UR or Umax, lower value; 96h	RJ71: by tolerance grade; RJ77: change/tolerance≤1[2]
Damp heat	40±2°C; RH90–95%; 96h	RJ71: by tolerance grade; RJ77: change/tolerance≤1[2]
Temperature cycling	−55±3°C □ 125±3°C; 3 cycles	RJ71: by tolerance grade; RJ77: change/tolerance≤1[2]
Terminal strength	Pull 10N; bend 5N, 90°; twist 180°, twice	RJ71: by tolerance grade; RJ77: change/tolerance≤1[2]
Solderability	235±5°C; 2±0.5s	Solder coverage ≥90%
Mechanical load	Vibration: RJ77 10–2000Hz, RJ71 10–500Hz; both 150m/s², 6h. Shock 500m/s², 11ms, 18 times; bump 250m/s², 6ms, 2000±10 times; constant acceleration 500m/s², 5min	RJ71: by tolerance grade; RJ77: change/tolerance≤1[2]
Endurance	70±2°C; UR or Umax, lower value; 1000h	RJ71: by tolerance grade; RJ77: change/tolerance≤1[2]

03 Ordering & applicable specifications

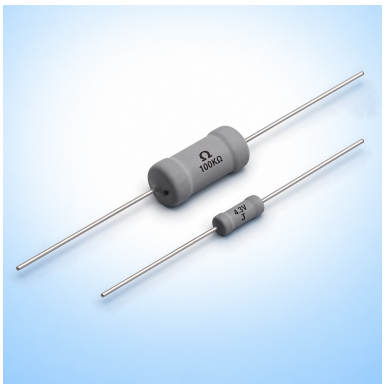
RJ77-0.25W-100kΩ-B | B ±0.1% • C ±0.2% • D ±0.5% • F ±1% • G ±2%

Quality grade YG; QB available. RJ71: Q/RU 252-2014; RJ77: Q/RU 251-2014; YG also per QZJ 840630; general specification GB/T 5729-2003.

1. TCR units: see page 1, note 2. RJ77 source bands overlap at 612Ω and 612kΩ; boundary tolerances require confirmation. 2. “Change/tolerance≤1” is retained from the source; RJ71 grade-specific limits and the RJ77 calculation basis require confirmation.

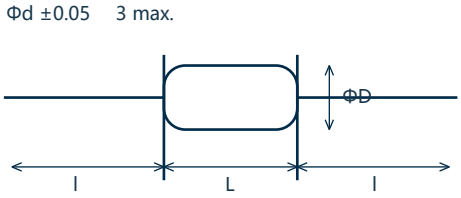
Metal Film Resistor Series

RJ51 · High temperature



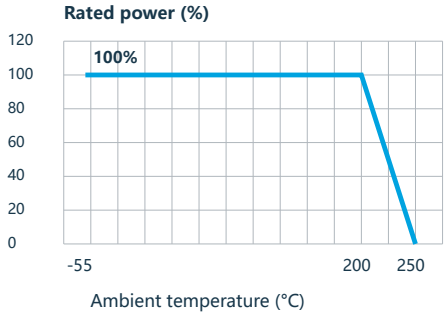
Series reference image; markings vary.

Outline / mm



Drawing not to scale

Power derating



01 Dimensions & electrical selection

Power W	L / mm	ΦD / mm	Φd / mm	l / mm	Resistance	Limit voltage V
0.25	8.0±0.5	2.6±0.3	0.6	25±2	100Ω–1MΩ	250
0.5	10.2±0.5	3.9±0.3	0.8	25±2	100Ω–3MΩ	350
1	12.7±0.7	6.3±0.5	0.8	30±2	100Ω–10MΩ	500
2	18.2±0.7	8.3±0.5	0.8	30±2	100Ω–10MΩ	750

Tolerance: ±5%, ±10%; E48 series. TCR value: ±600 (unit requires confirmation; see page 1, note 2).

02 Principal qualification tests

Test	Conditions / method	Requirements
Solderability	235±5°C; 2±0.5s	Free solder flow; leads well wetted
Mechanical load	Vibration 10–500Hz, 150m/s², 6h; bump 250m/s², 6ms, 2000±10 times; shock 500m/s², 11ms, 18 times; constant acceleration 500m/s², 5min	ΔR≤±2%R; no mechanical damage
Accelerated test	200±2°C; 1.5UR≤Umax; 96h	ΔR≤±4%R
Terminal strength	Pull 10N; bend 5N, 90°; twist 180°, twice	ΔR≤±1.5%R; no mechanical damage
Pulse load	100–20000Hz; 1–500μs; P=20%PR; 30min	ΔR≤±3%R
Temperature cycling	−55±3°C □ 250±3°C; 3 cycles	ΔR≤±2%R
Damp heat	40±2°C; RH90–95%; 240h	−3%R≤ΔR≤+5%R
Low air pressure	1kPa; R>1MΩ; 0.5W: 275VDC; 1W: 330VDC; 2W: 385VDC; 5min	No surface breakdown or flashover
Endurance	200±3°C; UR or Umax, lower value; 1000h	ΔR≤±8%R

03 Ordering & applicable specifications

RJ51-1W-100Ω-J | J ±5% • K ±10%

Quality grade YG; QB available. Detail specification Q/RU 340-2005; additional YG specification QZJ 84061; general specification GB/T 5729-2003.

Notation: PR = rated power; UR = rated voltage; Umax = limiting voltage; R = nominal resistance. Derating nodes redrawn from source: RJJ-6/7 85→125°C; RJ71/77 70→125°C; RJ51 200→250°C. Listed standards and grades reflect supplied data and do not constitute independent certification claims.

Source: the three supplied RJJ-6/RJJ-7, RJ71/RJ77 and RJ51 specification images. Parameters are transcribed and reorganized. Flagged items require engineering confirmation before final release.