Panasonic
INDUSTRY

Your Committed Enabler

Current Sensing Resistors

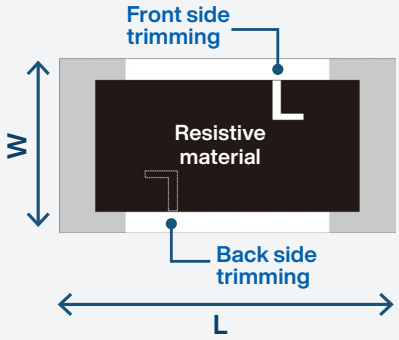
Double-Sided Type: ERJ*LW/BW/CW Series

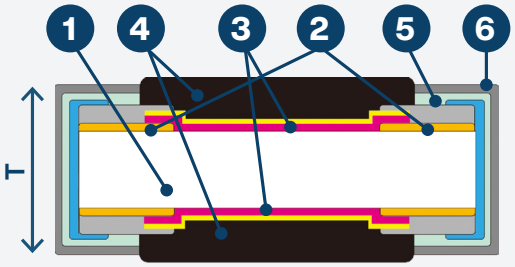
Added Value

- Small size and lightweight
- Realize both **low resistance (down to 5mΩ) & high precision (down to 75ppm/K)** by original thick film resistive element & special electrode structure
- Rated power up to 1W through double-sided resistive elements structure that is aimed to suppress temperature rising

Series (Size)	Resistance Tolerance (%)	Temperature Range (°C)	AEC-Q200 Grade
ERJ2LW (0402)	±1, ±2, ±5	−55 to +125	1
ERJ2BW (0402)	±1, ±2, ±5	−55 ~ +155	0
ERJ3LW (0603)	±1, ±2, ±5	−55 to +125	1
ERJ3BW (0603)	±1, ±2, ±5	−55 ~ +155	0
ERJ6LW (0805)	±1, ±2, ±5	−55 to +125	1
ERJ6BW (0805)	±1, ±2, ±5	−55 ~ +155	0
ERJ6CW (0805)	±0.5, ±1, ±2, ±5	−55 to +125	1
ERJ8BW (1206)	±1, ±2, ±5	−55 ~ +155	0
ERJ8CW (1206)	±1, ±2, ±5	−55 to +125	1

Double-Sided Type Structure





1. Alumina substrate
2. Electrode (Inner)
3. Resistive element
4. Protective coating
5. Electrode (Middle)
6. Electrode (Outer)

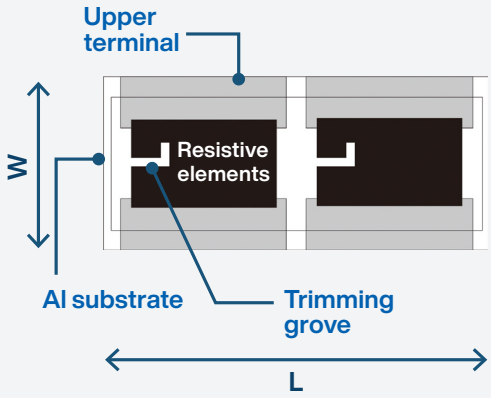
Wide Terminal Type: ERJA/B/D Series

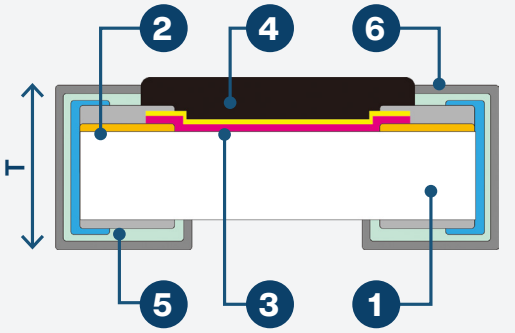
Added Value

- **Soft Terminal Technology:** High solder-joint reliability through a wide terminal structure yielding a reduction in solder-joint cracks
- Excellent heat dissipation characteristics through wide terminal structure
- Separated resistor structure which yields small size high-power (up to 2W) and overload chracteristics

Series (Size)	Resistance Tolerance (%)	Temperature Range (°C)	AEC-Q200 Grade
ERJA1 (1225)	±1, ±2, ±5	−55 ~ +155	0
ERJB1 (1020)	±1, ±2, ±5		
ERJD1 (1020)	±1, ±5		
ERJB2 (0612)	±1, ±2, ±5		
ERJD2 (0612)	±1, ±5		
ERJB3 (0508)	±1, ±2, ±5		

Wide Terminal Type Structure





1. Alumina substrate
2. Electrode (Inner)
3. Resistive element
4. Protective coating
5. Electrode (Outer)
6. Terminal Plating

For Automotive & High Reliability Applications

> Corresponding to AEC-Q200
> High power in small package
> High performance
> Cost saving
> High reliability
> Wide resistance value
> Excellent TCR
> Down-sizing
> Stability over lifetime

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Panasonic Current Sensing Resistors Line Up

Wide terminal type | Thick film double sided type | Thick film top sided type | *The numbers in the square indicate TCR (ppm)

Size inch (mm)	Power Rating (W)	Part Number	Resistance Range (mΩ)* 1 2 5 10 22 47 100 220 1000
0402 (1005)	0.166W	ERJ2BS/Q	0~+300 0~+250
	0.25W	ERJ2BW	0~+300
	0.2W	ERJ2LW	0~+500
0603 (1608)	0.25W	ERJ3BS/Q	0~+300
	0.2W	ERJL03	39mΩ ±200
	0.33W	ERJ3BW	0~+250 0~+150
	0.25W	ERJ3LW	0~+700 0~+300
0805 (2012)	0.5W	ERJ6DS/Q	0~+150 0~+100
	0.25W	ERJL06	15mΩ ±100
	0.5W	ERJ6BW	0~+300 0~+200
	0.5W	ERJ6CW	±75 30mΩ
	0.5W	ERJ6LW	0~+300
	0.5W	ERJB3	0~+300 0~+200
1206 (3216)	0.5W	ERJ8BS/Q	0~+250
	0.33W	ERJL08	**±100**
	1W	ERJ8BW	0~+200 0~+150 **0~+100**
	1W	ERJ8CW	**±75** 50mΩ
	1W	ERJB2	0~+300 0~+200 0~+150 0~+100 ±100
	1W	ERJD2	±100 200mΩ
1210 (3225)	0.5W	ERJ14BS/Q	0~+200
	0.33W	ERJL14	±300 ±100
1812 (4532)	0.5W	ERJ12RS/Q	0~+200
	0.5W	ERJL12	±300 ±100
2010 (5025)	0.5W	ERJ12ZS/Q	40mΩ 0~+200
	0.5W	ERJL1D	±300 ±100
	2W	ERJB1/C1	0~+350 0~+200 0~+150 **±100**
	2W	ERJD1	**±100** 200mΩ

ERJD2: Low TCR type
ERJD1: Low TCR type
ERJC1: Anti-sulfurated type

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