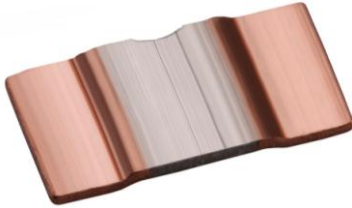


## Chip Shunt Resistor



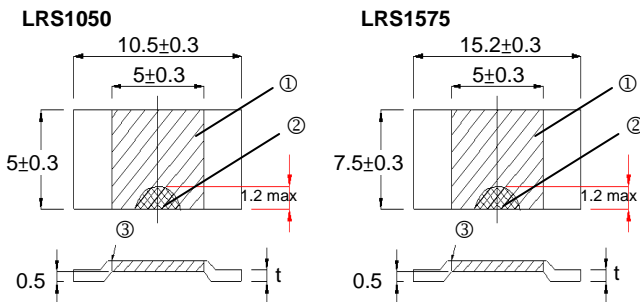
### ■ Features

- LRS1050 5W up to 100A at 0.5mΩ
- LRS1575 7W up to 180A at 0.2mΩ
- Maximum soldering temperatures of up to 350°C / 30 sec. or 250°C / 10 min
- Heavy copper connectors
- Excellent long-term stability and low inductance
- Mounting using re-flow soldering or welding on copper

### ■ Applications

- Current sensors for hybrid power sources
- Frequency converters
- High current automotive

### ■ Construction



① Resistance Material	② Trimming Area	③ Electron Beam Welding
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### ■ Dimensions

Unit: mm

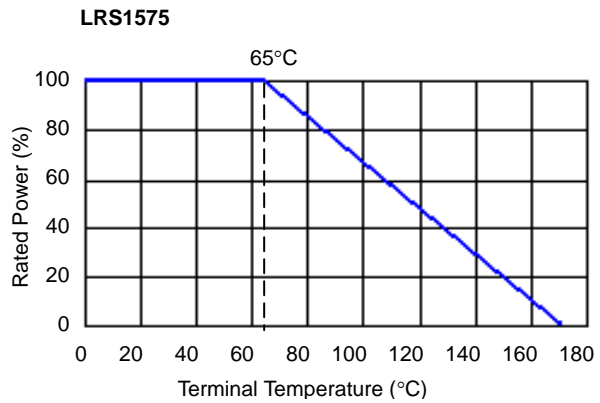
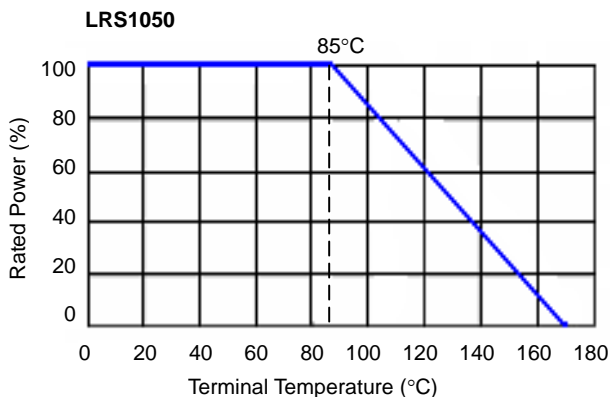
Type	Size (Inch)	Value	Material	Thickness (t)	Weight (g) (1000pcs)
LRS1050	1050	0.5mΩ	Manganin	0.88 mm±0.05	420
LRS1050	1050	1mΩ	Manganin	0.43 mm±0.05	220
LRS1050	1050	2mΩ	NiCr alloy	0.64 mm±0.05	310
LRS1050	1050	3mΩ	NiCr alloy	0.43 mm±0.05	210
LRS1050	1050	4mΩ	NiCr alloy	0.32 mm±0.05	160
LRS1575	1575	0.2mΩ	Manganin	1.50 mm±0.05	590
LRS1575	1575	0.5mΩ	Manganin	0.56 mm±0.05	590
LRS1575	1575	1mΩ	NiCr alloy	0.90 mm±0.05	940
LRS1575	1575	2mΩ	NiCr alloy	0.45 mm±0.05	470
LRS1575	1575	3mΩ	NiCr alloy	0.30 mm±0.05	320

**Chip Shunt Resistor**

**Part Numbering**

LRS	1050	F	T	D	D	0M50	M
Product Type	Dimensions	Resistance Tolerance	Packaging Code	TCR (PPM/°C)	Power Rating	Resistance	Marking Code
	1050: 10.5x5.0 1575: 15.2x7.5	F: ±1% G: ±2% J: ±5%	T: Taping Reel B: Bulk	D: ±50 1: ±60 W: ±75 E: ±100 2: ±120	B: 2.5W R: 3W C: 3.5W H: 4W D: 5W I: 6W E: 7W	0M50: 0.5mΩ R001: 1mΩ R002: 2mΩ R003: 3mΩ R004: 4mΩ	M: Manganin N: NiCr alloy

**Derating Curve**



**Standard Electrical Specifications**

Type	Power Rating	Operating Temp. Range	Resistance Range			TCR (PPM/°C) (+20°C ~ +150°C)	
			±1%	±2%	±5%		
LRS1050	5W	-55°C ~ +170°C		0.5mΩ		±75	
LRS1050	4W			1mΩ		±60	
LRS1050	4W				2mΩ		±100
LRS1050	3W				3mΩ		±100
LRS1050	2.5W				4mΩ		±100
LRS1575	7W				0.2mΩ		±50
LRS1575	6W				0.5mΩ		±100
LRS1575	6W				1mΩ		±120
LRS1575	4W				2mΩ		±120
LRS1575	3.5W				3mΩ		±120

**Chip Shunt Resistor**

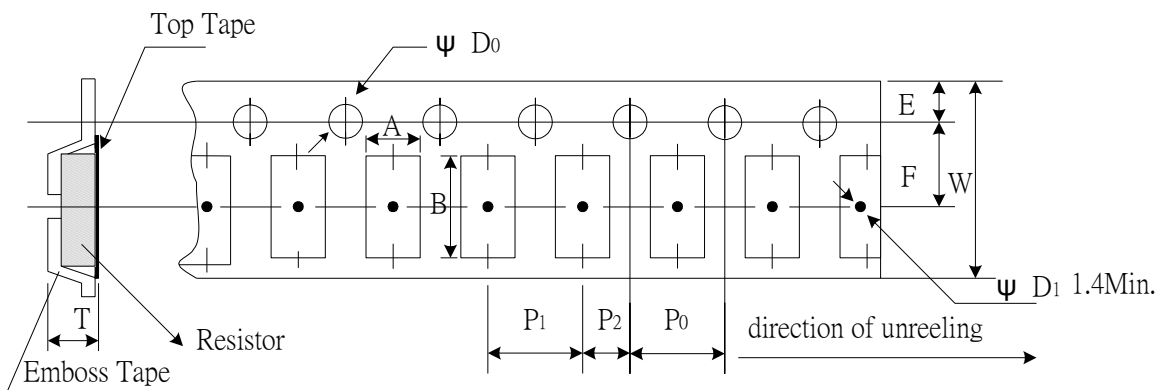
**Environmental Characteristics**

Item	Requirement	Test Method
Short time overload	±0.2%	Rated Power × 5 for 5 seconds
Load Life	±1.0%	90 min. "ON", 30 min. "OFF" for 2000 hours
Resistance to Soldering Heat	±0.2%	350°C for 30 seconds or 250°C for 10 min.
Thermal Shock	±0.1%	-65°C, 25°C, 125°C, 25°C, 25 cycles
Moisture Resistance	±0.2%	90 ~ 98%RH, +25°C, +65°C, -10°C, 10 cycles
High Temperature Exposure	±0.2%	140°C for 250 hours
Vibration, High Frequency	±0.2%	15g 10~2000Hz, 36 cycles
Inductance	<3nH	—

■ Storage Temperature: 25±3°C; Humidity < 80%RH

**Packaging**

Emboss Plastic Tape Specifications



Unit: mm

Type	A	B	W	E	F	P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	ØD <sub>0</sub>	T	Quantity (EA)
LRS1050	5.7	11.2	16	1.75	7.5	4	12	6	1.50	1.2	3000
LRS1575	8.2	16.1	24	1.75	11.5	4	12	6	1.50	1.9	2000