Data Sheet

Customer:	
Product:	**Chip Shunt Resistor — LRS Series**
Sizes.:	**1050/1575**
Issued Date:	**31-Mar-25**
Edition:	**REV.B4**

RoHS Compliant

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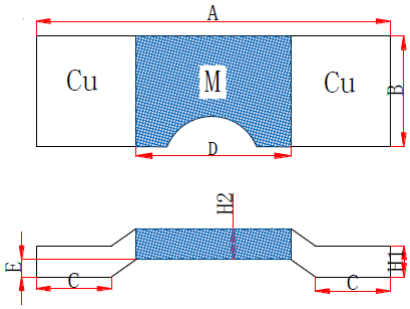
Chip Shunt Resistor



■Features

- Resistance value from 0.2mΩ~5mΩ
- Electron beam welding, stable performance
- RoHS compliant
- Excellent long term stability

■Construction



■Applications

- Switching Power Supply
- Voltage Regulation Module
- PDA and Cell Phone
- Power Module
- Frequency Converters
- DC-DC Converter, Adapter, Battery Pack, Charger
- Current Sensor for Power Hybrid Sources
- High Current Handling for Automotive Engine Controls and Power Management

■Dimensions

Type	Resistance (mΩ)	Material	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	H1 (mm)	H2 (mm)
LRS1050	0.2, 0.3	Manganin	10.50±0.30	5.00±0.30	2.00±0.30	5.00±0.30	0.50±0.10	1.50±0.20	1.50±0.20
	0.5	Manganin	10.50±0.30	5.00±0.30	2.00±0.30	5.00±0.30	0.50±0.10	0.95±0.10	0.95±0.10
	1	Manganin	10.50±0.30	5.00±0.30	2.00±0.30	5.00±0.30	0.50±0.10	0.43±0.10	0.43±0.10
	2	NiCr alloy	10.50±0.30	5.00±0.30	2.00±0.30	5.00±0.30	0.50±0.10	0.65±0.10	0.65±0.10
	3	NiCr alloy	10.50±0.30	5.00±0.30	2.00±0.30	5.00±0.30	0.50±0.10	0.43±0.10	0.43±0.10
	4	NiCr alloy	10.50±0.30	5.00±0.30	2.00±0.30	5.00±0.30	0.50±0.10	0.28±0.10	0.28±0.10
	5	NiCr alloy	10.50±0.30	5.00±0.30	2.00±0.30	5.00±0.30	0.50±0.10	0.28±0.10	0.28±0.10
LRS1575	0.2	Manganin	15.00±0.30	7.75±0.30	4.00±0.30	5.00±0.30	0.50±0.10	1.50±0.20	1.50±0.20
	0.4	Manganin	15.00±0.30	7.75±0.30	4.00±0.30	5.00±0.30	0.50±0.10	0.65±0.10	0.65±0.10
	0.5	Manganin	15.00±0.30	7.75±0.30	4.00±0.30	5.00±0.30	0.50±0.10	0.55±0.10	0.55±0.10
	1	Manganin	15.00±0.30	7.75±0.30	4.00±0.30	5.00±0.30	0.50±0.10	0.30±0.10	0.30±0.10
	2	NiCr alloy	15.00±0.30	7.75±0.30	4.00±0.30	5.00±0.30	0.50±0.10	0.43±0.10	0.43±0.10
	3	NiCr alloy	15.00±0.30	7.75±0.30	4.00±0.30	5.00±0.30	0.50±0.10	0.28±0.10	0.28±0.10
	5	NiCr alloy	15.00±0.30	7.75±0.30	4.00±0.30	5.00±0.30	0.50±0.10	0.20±0.10	0.20±0.10

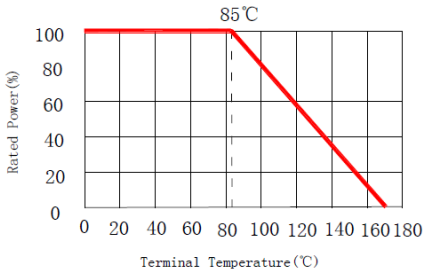
Chip Shunt Resistor

Part Numbering

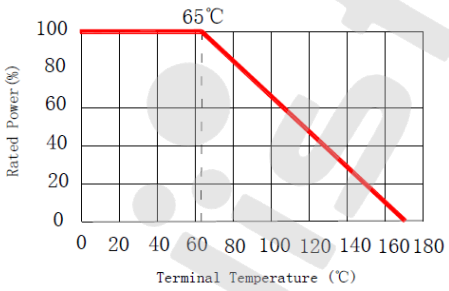
LRS	1050	F	T	W	H	0M50	M
Product Type	Dimensions	Resistance Tolerance	Packaging Code	TCR (PPM/℃)	Power Rating	Resistance	Material Code
	1050: 10.5x5.0 1575: 15.2x7.5	F: ±1% J: ±5%	T: Taping Reel B: Bluk	D: ±50 1: ±60 W: ±75 E: ±100 K: ±150	S: 2W B: 2.5W R: 3W C: 3.5W H: 4W D: 5W I: 6W E: 7W	0M20: 0.2mΩ 0M30: 0.3mΩ 0M50: 0.5mΩ R001: 1mΩ R002: 2mΩ R003: 3mΩ R004: 4mΩ	M: Manganin N: NiCr alloy K: Kamar

Derating Curve

LRS1050



LRS1575



Standard Electrical Specifications

Type	Power Rating	Material	Resistance Range(mΩ)		TCR (PPM/°C)
			±1%	±5%	
LRS1050	2W	NiCr alloy	5		±100
	2.5W	NiCr alloy	4		±100
	3W	NiCr alloy	3		±100
	4W	Manganin	1		±60
	4W	NiCr alloy	2		±100
	4W	Manganin	0.5		±75
	5W	Manganin	0.2, 0.3		±75
LRS1575	3W	NiCr alloy	5		±100
	3.5W	NiCr alloy	3		±100
	4W	NiCr alloy	2		±100
	6W	Manganin	0.5, 1		±100
	6W	Manganin	0.4		±50
	7W	Manganin	0.2		±50

Chip Shunt Resistor

■Environmental Characteristics

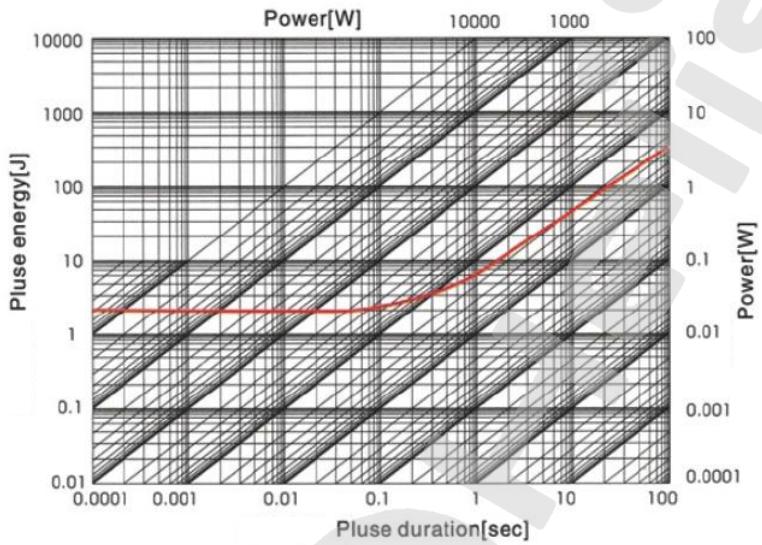
Item	Requirement		Test Method
	except 0603 5W	for 0603 5W	
Short time overload	△R≤±0.5%R		Rated Power × 5 for 5 seconds
Load Life	△R≤±1.0%R		70℃, power rated for 1000 hours
Resistance to Soldering Heat	△R≤±0.5%R	△R≤±1.0%R	260℃ for 10±1s
Thermal Shock	△R≤±0.5%R	△R≤±1.0%R	-55°C/175°C, 30min, 5 cycles
Moisture Resistance	△R≤±1.0%R		-55°C ,93±3%RH, 56d
High Temperature Exposure	△R≤±1.0%R		175℃ for 1000 hours
Vibration	△R≤±0.5%R		10～200Hz，98m/S^2，6hours

■Operating Temperature range: -55 ~ 125℃

■Storage Temperature: 5~40℃; Humidity 55~75%RH

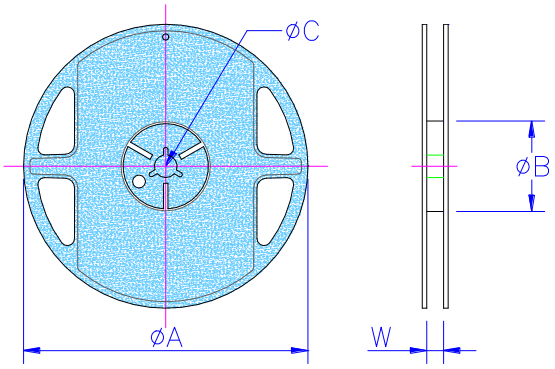
■Shelf life: 1 years Max

■Pulse Energy



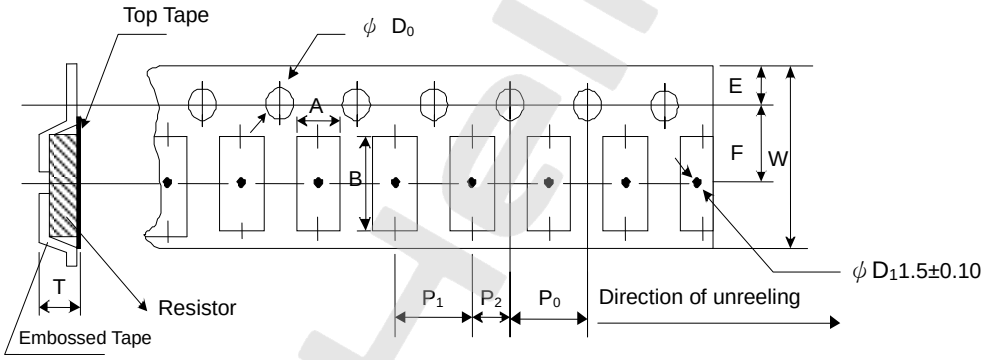
■Packaging

Reel Specifications & Packaging Quantity



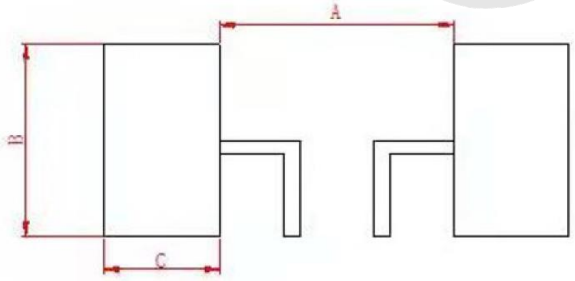
Type	Packaging Quantity		Tape Width	Reel Diameter	ΦA (mm)	ΦB (mm)	ΦC (mm)	W (mm)
LRS1050	Embossed	3K	24mm	13 inch	330.5±1.0	99.5±0.5	13.2+0.3/-0.2	25.4±0.5
LRS1575	Embossed	2K	24mm	13 inch	330.5±1.0	99.5±0.5	13.2+0.3/-0.2	25.4±0.5

Embossed Plastic Tape Specifications



Type	A (mm)	B (mm)	W (mm)	E (mm)	F (mm)	P_0 (mm)	P_1 (mm)	P_2 (mm)	ΦD_0 (mm)	T (mm)
LRS1050	5.70±0.10	11.20±0.10	24.0±0.30	1.75±0.10	11.5±0.15	4.00±0.10	8.00±0.10	2.00±0.10	1.50+0.1, -0	2.05±0.10
LRS1575	8.20±0.10	15.90±0.10	24.0±0.30	1.75±0.10	11.5±0.15	4.00±0.10	12.00±0.10	2.00±0.10	1.50+0.1, -0	2.05±0.10

■Recommend Land Pattern



Type	A (mm)	B (mm)	C (mm)
LRS1050	5.60±0.15	6.20±0.30	2.70±0.30
LRS1575	5.60±0.15	8.75±0.30	5.20±0.30

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version B4	Mar 31,2025		-According to EOL # 240703, Remove the LRS0630 Series specifications. -Add Shelf life.