

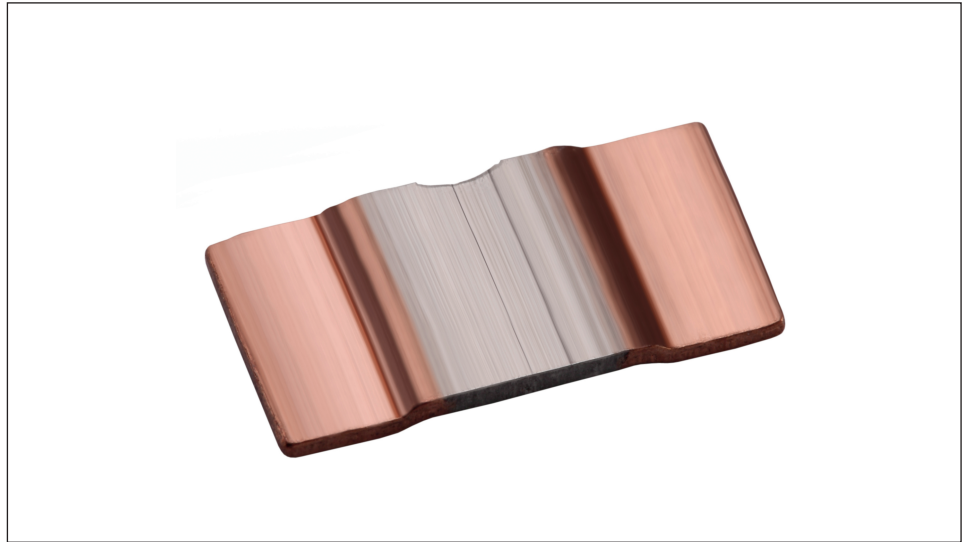
Type TLRS Series

Key Features

- Two Sizes
- Power ratings up to 7W
- Maximum Soldering temperatures of up to 350°C / 30 Seconds or 250°C / 10 Minutes
- Heavy Copper connectors

Applications

- Current sensors for Hybrid power sources
- Frequency convertors
- High Current Automotive



TE Connectivity is pleased to offer this Low Ohmic Surface Mount Shunt Resistor. Featuring Heavy Copper connectors, electron beam welded to a Manganin or NiCr alloy element, this resistor offers excellent long term stability and low inductance, and can be mounted using re-flow soldering techniques or welding on copper.

Characteristics – Electrical

Type	Power Rating (W)	Operating Temp. Range	Resistance Range			TCR (PPM/°C)
			±1%	±2%	±5%	
TLRS1050	5	-55°C – 170°C	0.5mΩ			±75
TLRS1050	4	-55°C – 170°C	1 mΩ			±60
TLRS1050	4	-55°C – 170°C	2 mΩ			±100
TLRS1050	3	-55°C – 170°C	3 mΩ			±100
TLRS1050	2.5	-55°C – 170°C	4 mΩ			±100
TLRS1575	7	-55°C – 170°C	0.2 mΩ			±50
TLRS1575	6	-55°C – 170°C	0.5 mΩ			±100
TLRS1575	6	-55°C – 170°C	1 mΩ			±120
TLRS1575	4	-55°C – 170°C	2 mΩ			±120
TLRS1575	3.5	-55°C – 170°C	3 mΩ			±120

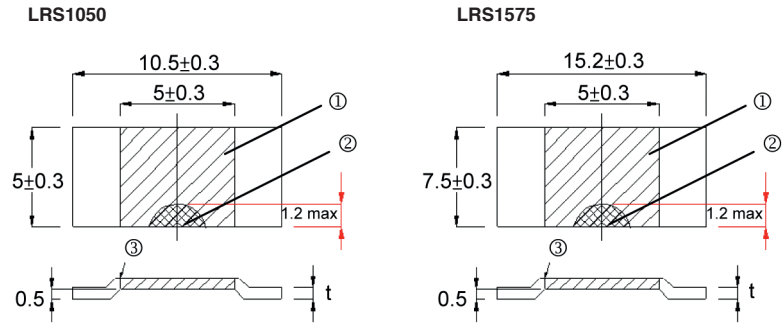
Characteristics – Environmental

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

Type TLRS Series

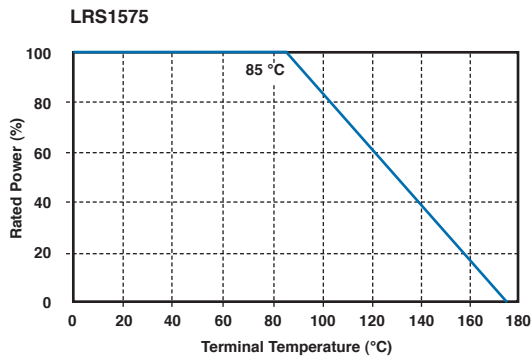
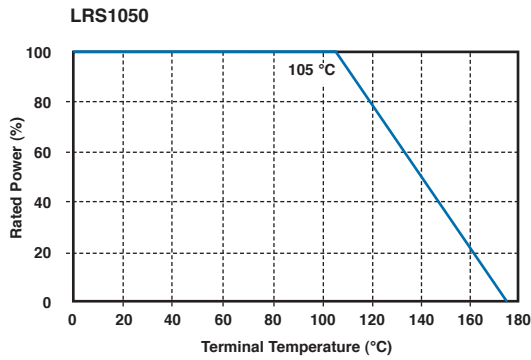
Construction



- ① Resistance Material
- ② Trimming Area
- ③ Electron Beam Welding

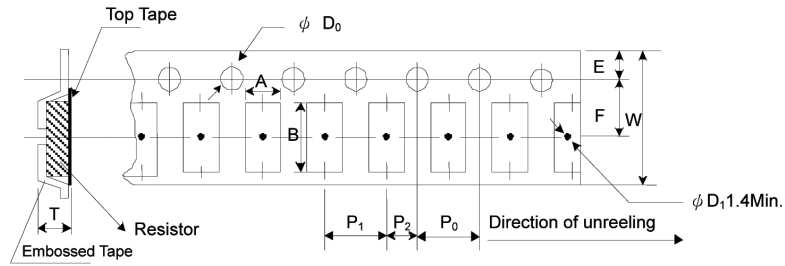
Type	Size (imp.)	Value	Material	Thickness (t) mm	Weight (g) (Each)
TLRS1050	1050	0.5 mΩ	Manganin	0.88±0.05	0.42
TLRS1050	1050	1 mΩ	Manganin	0.43±0.05	0.22
TLRS1050	1050	2 mΩ	NiCr alloy	0.64±0.05	0.31
TLRS1050	1050	3 mΩ	NiCr alloy	0.43±0.05	0.21
TLRS1050	1050	4 mΩ	NiCr alloy	0.32±0.05	0.16
TLRS1575	1575	0.2 mΩ	Manganin	1.50±0.05	0.59
TLRS1575	1575	0.5 mΩ	Manganin	0.56±0.05	0.59
TLRS1575	1575	1 mΩ	NiCr alloy	0.90±0.05	0.94
TLRS1575	1575	2 mΩ	NiCr alloy	0.45±0.05	0.47
TLRS1575	1575	3 mΩ	NiCr alloy	0.30±0.05	0.32

Derating Curve



Type TLRS Series

Embossed Plastic Tape Specifications



Type	A	B	W	E	F	P ₀	P ₁	P ₂	øD ₀	T	Quantity (EA)
TLRS1050	5.5	10.8	16	1.75	7.5	4	12	6	1.50	1.2	3,000
TLRS1575	8.4	15.7	24	1.75	11.5	4	12	6	1.50	1.2	2,000

How to Order

TLRS1050	40	P	R001	F	TDG
Common Part	Power Rating	TCR	Resistance Code	Tolerance Code	Packaging
TLRS1050 TLRS1575	25 = 2.5 W 30 = 3.0 W 35 = 3.5 W 40 = 4.0 W 50 = 5.0 W 60 = 5.0 W 70 = 7.0 W	D = ±50 PPM P = ±60 PPM W = ±75 PPM E = ±100 PPM Q = ±120 PPM	0.2 Ohm = R0002 1mΩ = R001	F = ±1% G = ±2% J = ±5%	TDG – Standard Quantity as per above chart

TE Connectivity, TE connectivity (logo) and TE (logo) are trademarks.
Other logos, product and Company names mentioned herein may be trademarks of their respective owners.

While TE has made every reasonable effort to ensure the accuracy of the information in this datasheet, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this datasheet are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE for the latest dimensions and design specifications.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Current Sense Resistors - SMD category](#):

Click to view products by [TE Connectivity manufacturer](#):

Other Similar products are found below :

[5112](#) [65709-330JE](#) [PF2512FKF7W0R007L](#) [PR2512FKF7W0R003L](#) [PR2512FKF7W0R005L](#) [RCWL0603R500JNEA](#) [ERJ-3BQF1R1V](#) [ERJ-L14UJ42MU](#) [2-2176088-5](#) [PF2512FKF7W0R006L](#) [PF2512FKF7W0R033L](#) [2-2176089-4](#) [CD2015FC-0.10-1%](#) [PR2512FKF7W0R004L](#) [CGSSL1R01J](#) [CGSSL1R047J](#) [RC1005F124CS](#) [RCWE2512R110FKEA](#) [RCWL0805R330JNEA](#) [RL73H3AR47FTE](#) [RL73K3AR56JTDF](#) [RL7520WT-R001-F](#) [RL7520WT-R009-G](#) [RL7520WT-R020-F](#) [RLP73N1ER43JTD](#) [TL3AR01FTDG](#) [TLR3A20DR0005FTDG](#) [LRC-LR2512LF-01-R820J](#) [ERJ-3BQF4R3V](#) [ERJ-L14UF68MU](#) [TLR3A20DR001FTDG](#) [TLR3A30ER0005FTDG](#) [WR06X104JGLJ](#) [RLP73K1ER82JTD](#) [TL2BR01F](#) [TLR3A20DR01FTDG](#) [WSR3R0600FEA32](#) [ERJ-14BQF1R6U](#) [ERJ-14BQJR30U](#) [SP1220RJT](#) [SP1R12J](#) [ERJ-14BQF6R2U](#) [RL7520WT-R039-G](#) [PF1206FRF7W0R02L](#) [RL7520WT-R002-F](#) [RL7520WT-R047-F](#) [RLP73N2BR068FTDF](#) [RL7520WT-R005-F](#) [RCWE2512R220FKEA](#) [RCWE120625L0FMEA](#)