

Low Ohm Current Sensing Resistors

Token (LPS) Family Offers A Variety of Possibilities for Shunt-Resistors

▶ Preview

Token's current sense LPS family for shunt-resistors is expected to gain wide acceptance in the worldwide market as a result of offering a variety of possibilities.

The U-shaped semi-customized LPS family for direct board mounting is specified for current sensing, feedback, current detective, super low inductance, as well as surge and pulse applications. LPS family Available in very low ohm ($0.002\Omega \sim 0.05\Omega$) and high power ($1W \sim 5W$).

The dimensions of the semi-customized final unit is designed in accordance with the applicational requirements of resistance value and required power rating. Token's LPS series can be manufactured with 2 or 4 soldertags (terminals). The LPS type B with 2 soldertags (1 pin on each side) is a standard part of LPS series and type A with 4 terminals (2 pin on each side) is used either for Kelvin connections or for high current applications. Depending from the alloy material's thickness, one terminal contact on each side can carry up to 50A ($A \text{ (Current)} = (W \text{ (Power)} / \Omega \text{ (Resistance)})^{1/2}$), so a 4-terminal part can carry 100A (ask Token factory).

Operating temperature range is -50°C to 300°C with tolerances $\pm 2\%$, $\pm 5\%$, and $\pm 10\%$.

Token will also produce low ohm resistor LPS series outside these specifications to meet customer requirements. Contact us with your specific needs.



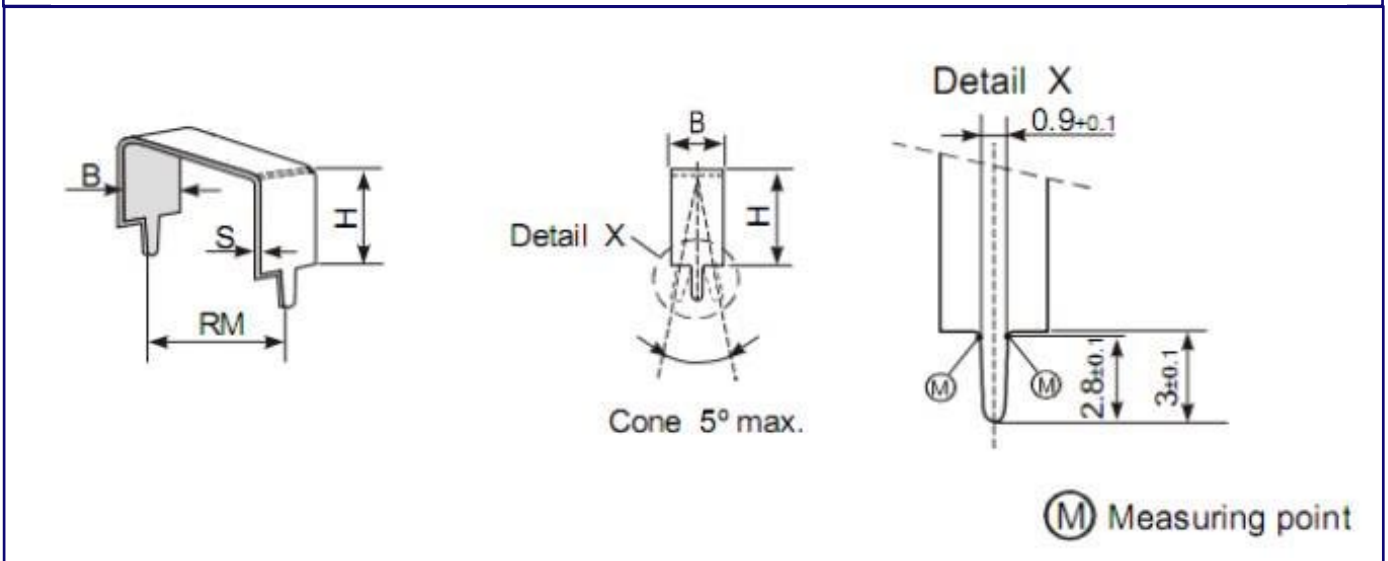
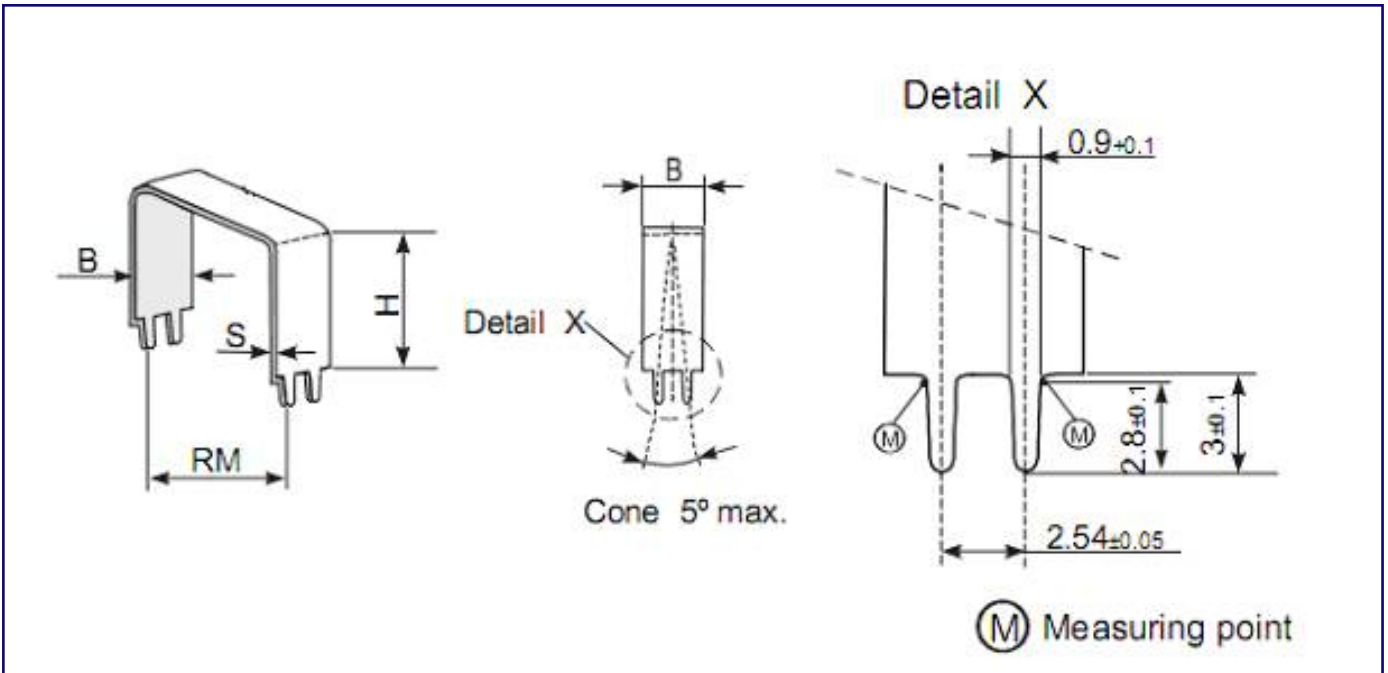
▶ Features

- Radial leads.
- Non-inductance.
- Solderable Copper Leads.
- Lead (Pb)-free and RoHS compliant.
- $\pm 2\%$, $\pm 5\%$, $\pm 10\%$ standard tolerance.
- High stability bare metal element open air style.

▶ Applications

- High power AC/DC detection.
- Automotive, Feedback System.
- Residual Battery Power Detection.
- Inverter and Switching Power Supplies
- CPU Drive Control, Power Tool Motor controls.
- Power Supply Shunt, Current Detective, and Current Sensing.

► Dimensions (Unit: mm)



Type	Power (Watts)	Resistance Range (Ω)	RM (mm)	H (mm) Max.
LPS359-008	1	R005~R05	5 ~ 30	20.0
LPS359-009	2	R005~R02		
LPS359-010	3	R003~R01		
LPS359-011	5	R002~R005		

Construction: 1. W, T and H depend on material, resistance value and required power rating.

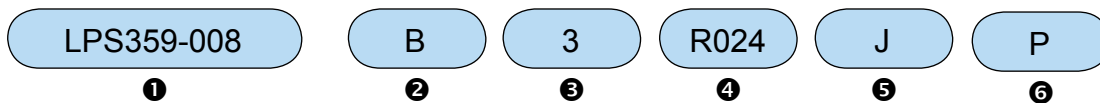
2. RM: 5~30 mm, preferably in 5 mm-steps. Special varieties on request.

3. M: Measuring point.

▶ Characteristic Specification

Test Items	Specification
Resistance range	R002~R05
Tolerances	±2%, ±5%, ±10%
Temperature coefficient	Upon request
Insulation voltage	Non insulated
Insulation resistance	Non insulated
Derating, linear	70~300°C(0W)
Climatic category	55/155/21
Temperature range	-50~300°C
Endurance (P70, 70°C, 1000 Hrs.)	$\Delta R \leq \pm 2\%R$
Damp heat, steady state (40°C, 93% r.h., 56d)	$\Delta R \leq \pm 2\%R$
Climatic sequence	$\Delta R \leq \pm 0.5\%R$
Terminal strength	None
Terminal tensile strength	None
Resistance to soldering heat (350°C, 3.5s)	$\Delta R \leq \pm 0.5\%R$ typ.
Solderability (Solder bath method 235±5°C, 2±0.5s)	Good tinning (≥ 90 % covered), no visible damage

▶ How to Order



① Part Number: LPS359-008, LPS359-009, LPS359-010, LPS359-011

② Terminal Type

Code	Resistance Value (Ω)
A	4 Terminals
B	2 Terminals

② Rated power

Code	Rated power
1	1 Watt
2	2 Watt
3	3 Watt
5	5 Watt

⑤ Resistance Value (Ω)

Code	Resistance Value (Ω)
R002	0.002Ω
R010	0.010Ω
R022	0.022Ω
R050	0.050Ω

④ Tolerance %

Code	Tolerance %
G	±2%
J	±5%
K	±10%

⑤ Package-Code

Code	Package-Code
P	Bulk

Back to 1st Page - Low Ohm Current Sensing Resistors (LPS)