Current Sensing(4 Termination) Resistors

PLRW Series

■Features

1. Features

Ultra low resistance andnarrow tolerance suitable forcurrent detection

High component andequipment reliability

Total lead free without RoHSexemption

■APPLICATIONS

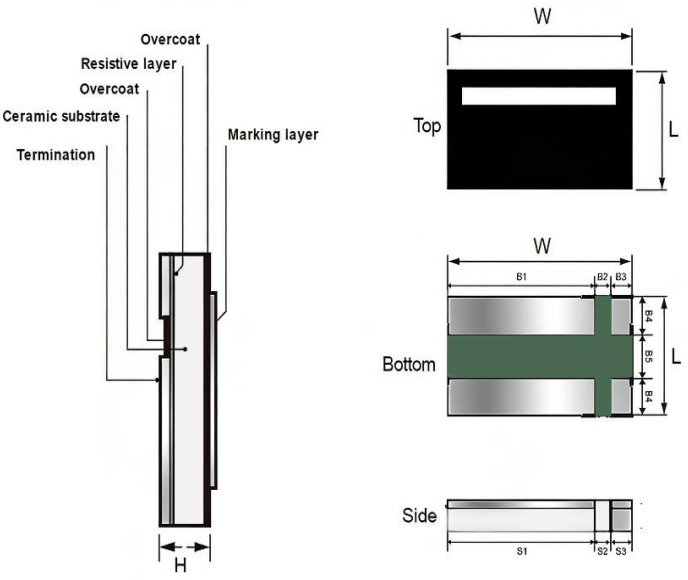
Inverter/Converter (DCDC/AC-DC/DC-AC)

Consumer electronics， Laptops ， Battery pack

■PART NUMBER

PLRW	0612	F	H	R010	T	40	B
PART CODE	SIZE	TOLERANCE	TCR	RESISTANCE	PACKAG-ING	PACKAGE	Power
	0612	J=±5% F=±1% D=±0.5%	K±75PPM/°C G±100PPM/°C L±150PPM/°C H±200PPM/°C I±200PPM/°C	R010=0.01Ω R005=0.005Ω	B=BULK T= TAPING REEL	40=4000PCS	D=1/2W B=1W Q=1.5W

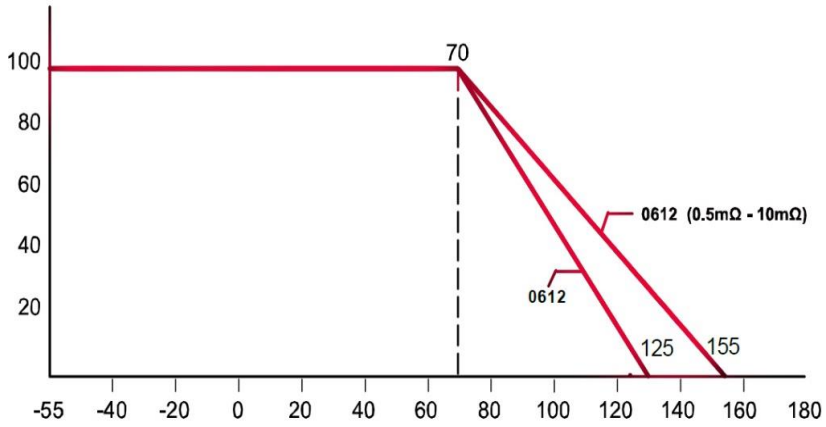
■DIMENSION



unit：㎜

TYPE	W	L	S1 \B1	S2\B2	S3 \B3	B4	B4	H
PLRW0612	3.2±0.2	1.6±0.2	2.2±0.2	0.5±0.2	0.5±0.2	0.45±0.2	0.7±0.2	(12~100mΩ) 0.5± 0.2 (2~10mΩ) 0.6± 0.2 (0.5~1mΩ) 0.7± 0.2

■Power Derating Curve



Operating Temperature Range: -55 to +155 deg.C

■Characteristics

SIZE	Power Rating at 70℃	Resistance	Resistance Tolerance (%)	Temperature coefficient of Resistance (ppm/℃)	OperatingTemp. Range
PLRW0612	1W	10mΩ ≤ R ≤ 13mΩ	±0.5% D ±1% F ±5% J	±200	-55~+155°C
		14mΩ ≤ R ≤ 100mΩ		±100	
		2mΩ ≤ R ≤ 9mΩ		±100	
		1mΩ		±100	
				±150	
		0.5mΩ		±300	
	1.5W	1mΩ ≤ R ≤ 5mΩ	±1% F ±5% J	±100	
		0.5mΩ		±300	

■Rating

The DC or AC (rms) continuous working voltage corresponding to the rated power is determined by the following formula:

V = (P *R)

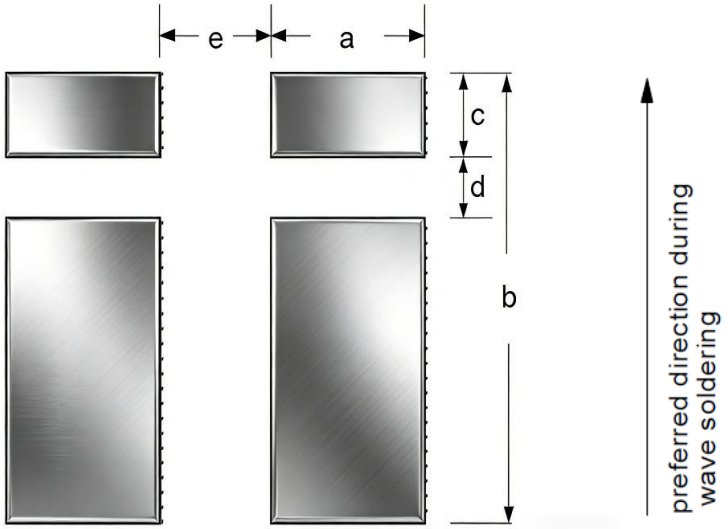
Where

V = Continuous rated DC or AC (rms) working voltage (V)

P = Rated power (W)

R = Resistance value (Ω)

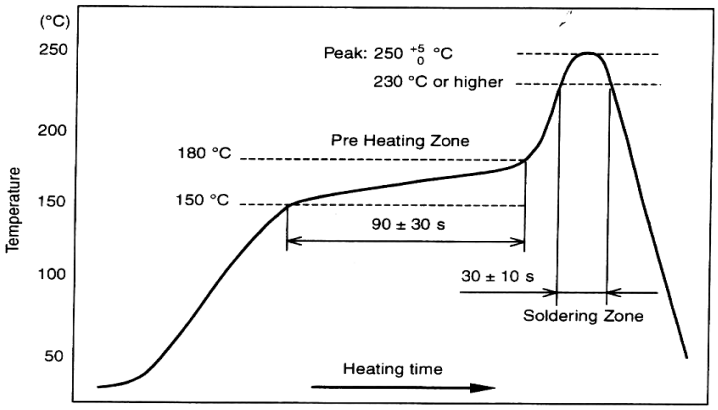
■ Advise Solder plate size



Unit: mm

Resistance (mΩ)	a	b	C	d	e	t(um)
0.0005~0.1	1.0mm	3.5mm	0.8mm	0.38mm	0.75mm	105

■ IR - Reflow soldering (weld:Sn96.5/Ag3/Cu0.5)



Peak value：260+5/-0℃，5s

Area of preheating:150~180℃，90±30s

Welding zone：≥230℃，30±10s

Soldering iron：350±10℃，3+1/-0s

Reliability Performance

* Normal test items for standard product.

Test Item	REQUIREMENTS	Test Method	PROCEDURE
High Temperature Exposure/ Endurance at Upper Category Temperature	± (1%+0.0005 Ω)	IEC 60068-2-2	1,000 hours at 125 °C &155 °C ,unpowered
Life/ Operational Life/ Endurance	± (1%+0.0005 Ω)	MIL-STD-202- method 108	1,000 hours at 70± 2 °C applied RCWV
Moisture Resistance	± (0.5%+0.0005 Ω)	MIL-STD-202- method 106	Each temperature / humidity cycle is defined at 8 hours (method 106F), 3 cycles / 24 hours for 10d with 25 °C / 65 °C 95% R.H, without steps 7a & 7b, unpowered Parts mounted on test-boards, without condensation on parts Measurement at 24± 2 hours after test conclusion
Thermal Shock	± (1%+0.0005 Ω)	MIL-STD-202- method 107	-55/+125 °C Note: Number of cycles required is 300. Devices mounted Maximum transfer time is 20 seconds. Dwell time is 15 minutes. Air – Air
Short Time Overload	± (1%+0.0005 Ω) No visible damage	IEC60115-1 4.13	5 times of rated power for 5 seconds at room temperature
Board Flex/ Bending	± (1%+0.0005 Ω) No visible damage	IEC 60068-2-21	Chips mounted on a 90mm glass epoxy resin PCB(FR4) 2 mm bending Bending time: 60± 5 seconds