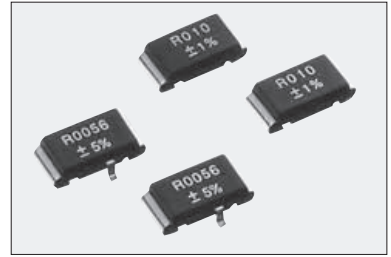


## ISA-PLAN PRECISION SHUNT CHIP RESISTORS

SMV, SMR

Type	Load Capacity(W)* [Free air]	Resistance Range(Ω)	Resistance Tolerance(%)	Terminal	Temp. Coefficient(20°C~60°C)	Operating Temp.	Solder Reflow	Weight(g)
SMV	3 [1]	0.001~1	±0.5, ±1, ±5	4	±30ppm/°C	-55°C~+125°C	MAX.255°C (t<40sec)	0.65
SMR	3 [1]	0.01~4.7	±1, ±5	2	±50ppm/°C			0.63



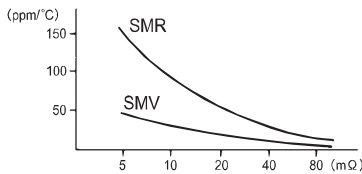
The real is marked with laser.(picture: ink print)

\* Referring to power derating curve. Proper measures for heat radiation should be taken.

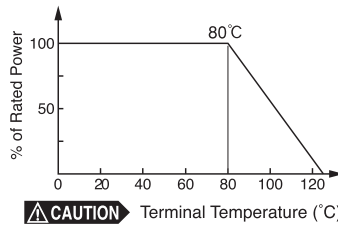


Internal Thermal Resistance (foil/contacts):.....15°C/W

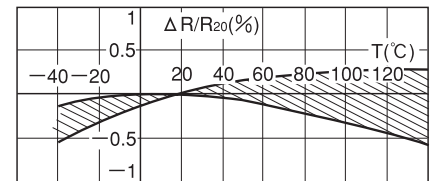
### Temperature Coefficient (Low Resistance Values)



### Power Derating Curve

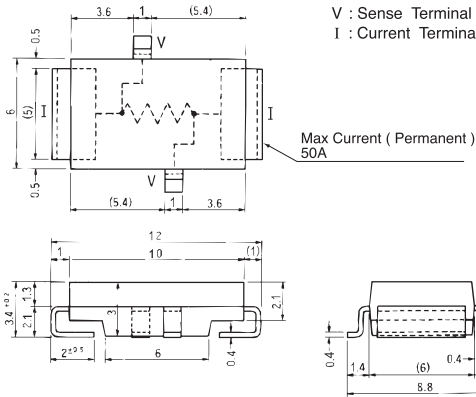


### Resistance Change Versus Temp.

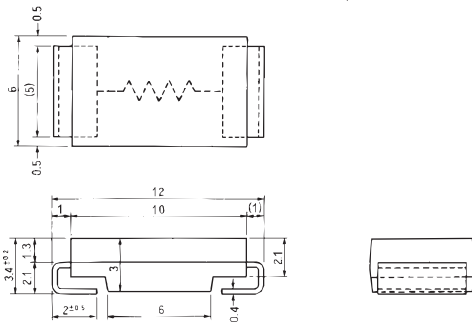


### Dimensions (mm)

#### SMV



#### SMR

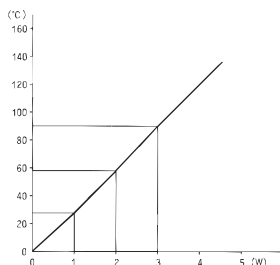


### Performance

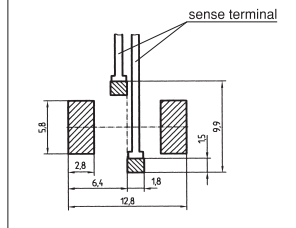
Parameters	Test Condition	Specification	Typical Test Data
Thermal Shock	-65°C, 25°C, 125°C, 25°C 25cycles	±0.2%	±0.05%
Over Load	5× Wattage Rating 5sec	±0.2%	±0.1%
Resistance to Solvents	IPA 3min	No Damage	No Damage
Low Temp. Storage and Operation	MIL-R-26E	±0.1%	±0.05%
Terminal Strength	44N 5~10sec	±0.02%	0
Resistance to Soldering Heat	260°C 10sec	±0.1%	±0.05%
Moisture Resistance	Near 100%RH, +25°C, +65°C, -10°C 10cycles (10days)	±0.1%	±0.02%
Shock	50g's, 11ms	±0.2%	±0.1%
Vibration, High Frequency	MIL-STD-202 Method 204D-B	±0.2%	±0.1%
Load Life	Wattage Rating (1.5Hr ON-0.5Hr OFF) 2000Hr	±0.5%	±0.2%
Storage Life at Elevated Temp.	MIL-STD-202 method 108A-F	±0.3%	±0.1%
High Temperature Exposure	140°C 2000Hr	±0.5%	±0.2%
Current Noise	MIL-STD-202 method 308	±0.01%	none
Voltage Coefficient	MIL-STD-202 method 309	linearity error less than 120dB	
Thermal EMF	0~100°C	3μV/°C MAX	2μV/°C
Frequency Characteristic	Inductance	<20nH	6nH(SMR 0.1Ω)

### Surface Temperature Versus Power Load.

Cu connection area 6cm<sup>2</sup>



### 4terminal connection



### How to order

**SMV 4.7mΩ ±1%**  
 Type Resistance Tolerance

- Standard Resistance E-06 Series ● Taping Standard Quantity  
 SMV : 1500pcs  
 SMR : 1500pcs
- Standard Resistance (Stock)

SMV					1 (mΩ) ± 1%	
	1.5	3.3	4.7	6.8 (mΩ) ± 1%		
	10	15	22	33	47	68 (mΩ) ± 0.5%
	100	150	220	330	470	680 (mΩ) ± 0.5%
						1(Ω) ± 0.5%



**PCN Corporation**

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