

**ISA-WELD SHUNT RESISTORS** **BAS**

**Features**

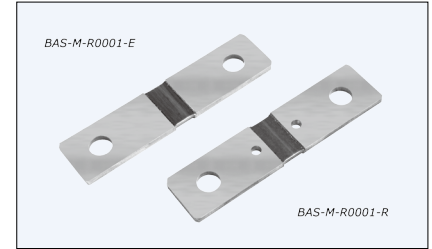
- Shunt resistor developed for current sensing of automotive battery management
- Electron beam used to weld the resistive element and terminals
- Excellent electrical and mechanical structure

**Max. Current (Continuous) 350A**

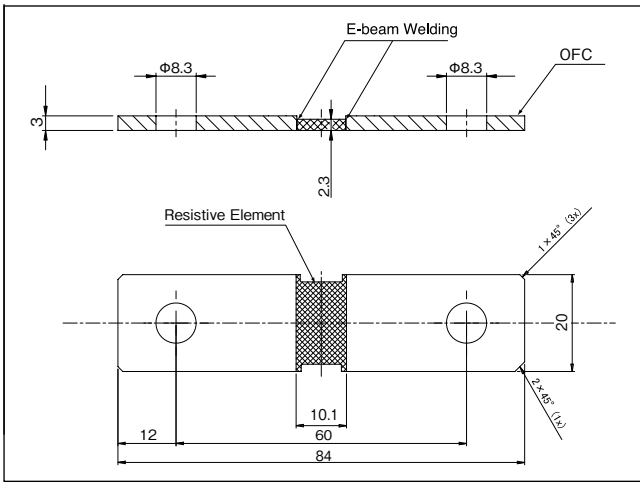
Type	Load Capacity (W) *	Resistance (Ω)	Tolerance (%)	Temp. Coefficient (20°C~60°C)	Operating Temp.	Internal Heat Resistance (°C/W)a-b	Weight (g)
BAS-M-R00005	20	0.05m	±5	±100ppm/°C	-40~+170	1.5	40
BAS-M-R0001	15	0.1m				2	
BAS-M-R0002	10	0.2m	3				
BAS-M-R0005	4	0.5m	7				

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

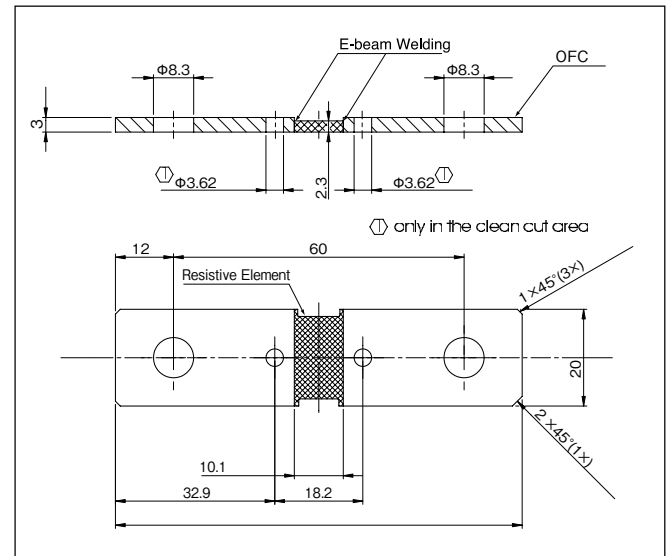
**⚠ Precautions**



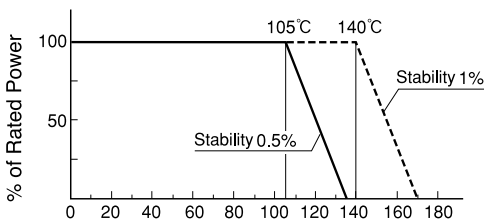
**Version E**



**Version R**

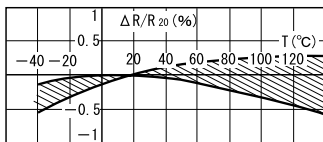


**Power Derating Curve**

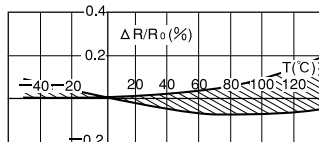


**⚠ Precautions** Terminal Temperature(°C)

Resistance Change Versus Temp. (ISA Manganin)



Resistance Change Versus Temp. (Alu-Chrom)



**How to order**

**BAS-M-R0001 — E**  
 Type Terminal  
 E : Version E  
 R : Version R

● Order for a single piece accepted

**Standard Resistance (Stock)**

**BAS-M-R0001 (0.1mΩ ±5%)**

**■ Performance**

Parameters	Test Conditions	Specification
Thermal Shock	-65°C, 25°C, 125°C, 25°C 25cycles	±0.2%
Over load	5×Wattage Rating 5sec	±0.2%
Resistance to Solvents	IPA 3min	No damage
Low Temp. Storage and Operation	MIL-R-26E	±0.1%
Resistance to Soldering Heat	260°C 10sec	±0.2%
Moisture Resistance	Near 100%RH, +25°C, +65°C, -10°C 10cycles (10days)	±0.2%
Shock	50g's, 11ms	±0.2%
Vibration, High Frequency	MIL-STD-202 Method 204D-B	±0.2%
Load Life (Terminal Temp., Max. 105°C)	1.5Hr ON 0.5Hr OFF 2000Hr	±0.5 %
Load Life (Terminal Temp., Max. 140°C)	1.5Hr ON 0.5Hr OFF 2000Hr	± 1 %
Storage Life at Elevated Temp.	MIL-STD-202 method 108A-F	±0.3%
High Temperature Exposure	140°C, 2000Hr	±0.5%
Current Noise	MIL-STD-202 method 308	±0.01%
Voltage Coefficient	MIL-STD-202 method 309	linearity error less than 120dB
Thermal EMF (μV / °C)	0~60°C	0.6 μV/°C max
Frequency Characteristic	Inductance	<3nH