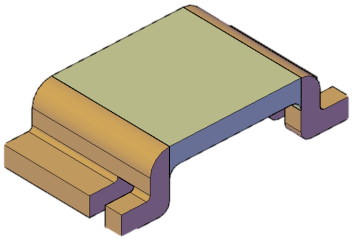
PROSEMI

Automotive Size 4026 (6.6x6.9mm)
Alloy Shunt Resistors

ASRC40 Series

PROSEMI offers AEC-Q200 qualified current Sensing Resistor. ASRC40 Series Alloy Shunt Resistors aid precision measurement and high-current applications. A wide range of precision shunts, designed for use with kilowatt-hour meters and other high-current applications where a high level of accuracy is required, is now available from PROSEMI.



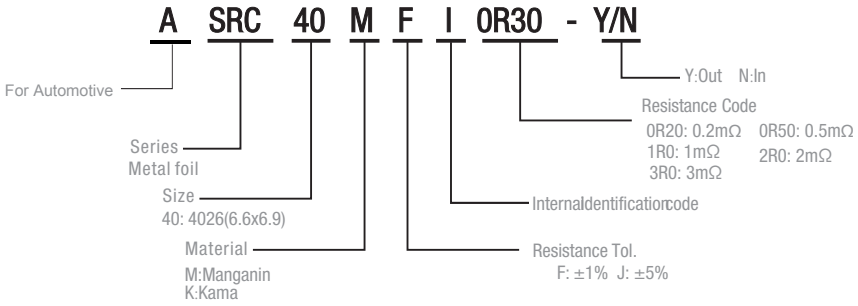
ASRC40 Series(Out)

Features

- Power rating up to 5 W
- Low inductance
- Extremely low resistance values (down to 0.2mΩ)
- Halogen free, lead free and RoHS compliant
- AEC-Q200 qualified available

Appications

- Current sensor for power hybrid applications
- Frequency converters
- Power modules
- Communication system
- Automatic control power supply
- High current applications for the automotive market



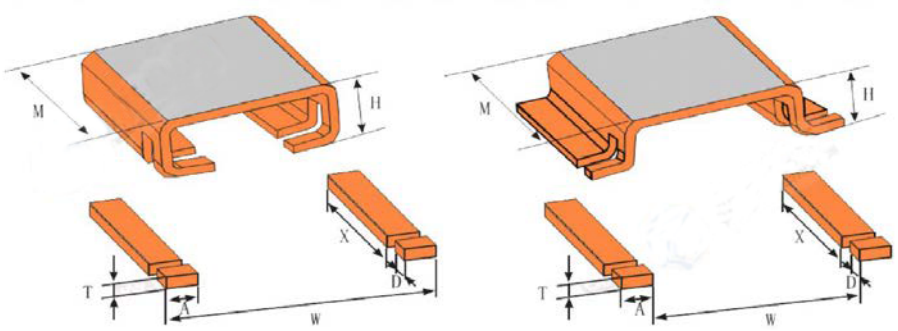
Part Number	Power Rating P100°C (W)	Resistance Range (mΩ)	TCR (ppm/°C)	Material
ASRC40M_I0R20-Y	5	0.2	±70	Manganin
ASRC40M_I0R30-Y	5	0.3	±70	Manganin
ASRC40M_I0R50-Y	5	0.5	±70	Manganin
ASRC40M_I1R0-Y	5	1	±70	Manganin
ASRC40K_I2R0-Y	5	2	±40	Kama
ASRC40K_I3R0-Y	5	3	±40	Kama
ASRC40M_I0R50-N	5	0.5	±70	Manganin
ASRC40M_I1R0-N	5	1	±70	Manganin
ASRC40K_I2R0-N	5	2	±40	Kama
ASRC40K_I3R0-N	5	3	±40	Kama

Applicable temperature range of -65°C to +170°C

Size 4026 (6.6x6.9mm)

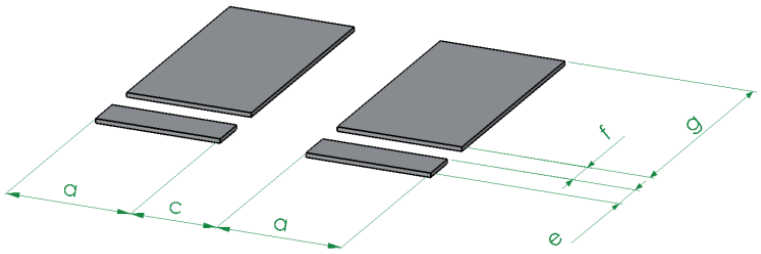
Automotive Alloy Shunt Resistors — ASRC40 Series

Dimension



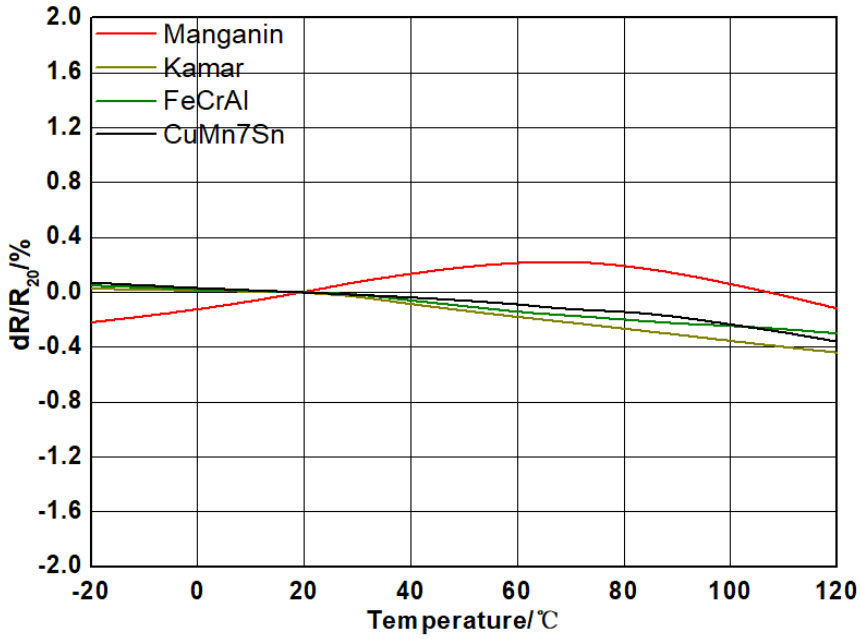
Type	M	H	W	T	A	X	D
ASRC40M_I0R20-Y	6.6±0.3	3±0.5	6.9±0.3	1.05±0.1	2.5±0.2	4.8±0.4	0.9
ASRC40M_I0R30-Y	6.6±0.3	3±0.5	6.9±0.3	1.06±0.1	2.5±0.2	4.8±0.4	0.9
ASRC40M_I0R50-Y	6.6±0.3	3±0.5	6.9±0.3	0.67±0.1	2.5±0.2	4.8±0.4	0.9
ASRC40M_I1R0-Y	6.6±0.3	3±0.5	6.9±0.3	0.33±0.1	2.5±0.2	4.8±0.4	0.9
ASRC40K_I2R0-Y	6.6±0.3	3±0.5	6.9±0.3	0.47±0.1	2.5±0.2	4.8±0.4	0.9
ASRC40K_I3R0-Y	6.6±0.3	3±0.5	6.9±0.3	0.34±0.1	2.5±0.2	4.8±0.4	0.9
ASRC40M_I0R50-N	6.6±0.3	3±0.5	6.9±0.3	0.67±0.1	2.5±0.2	4.8±0.4	0.9
ASRC40M_I1R0-N	6.6±0.3	3±0.5	6.9±0.3	0.33±0.1	2.5±0.2	4.8±0.4	0.9
ASRC40K_I2R0-N	6.6±0.3	3±0.5	6.9±0.3	0.50±0.1	2.5±0.2	4.8±0.4	0.9
ASRC40K_I3R0-N	6.6±0.3	3±0.5	6.9±0.3	0.34±0.1	2.5±0.2	4.8±0.4	0.9

Recommended Solder Pad Layout

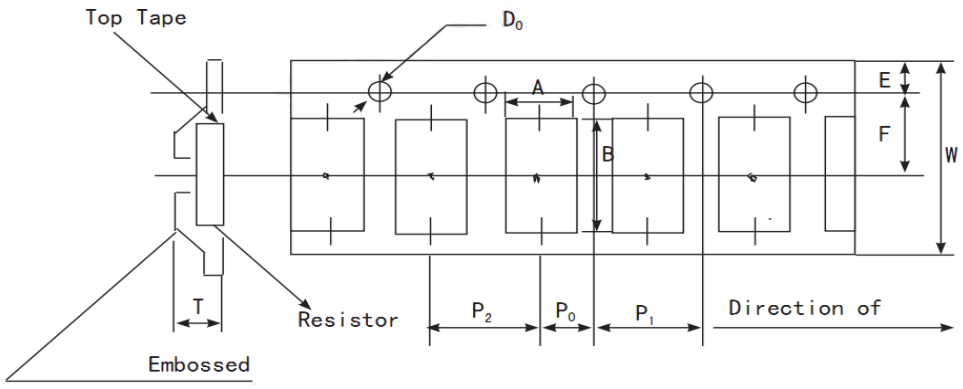


PCB	a	c	e	f	g
In	2.9	2	0.9	0.8	5.6
Out	4	5.5	0.9	0.8	5.6

TCR Derating

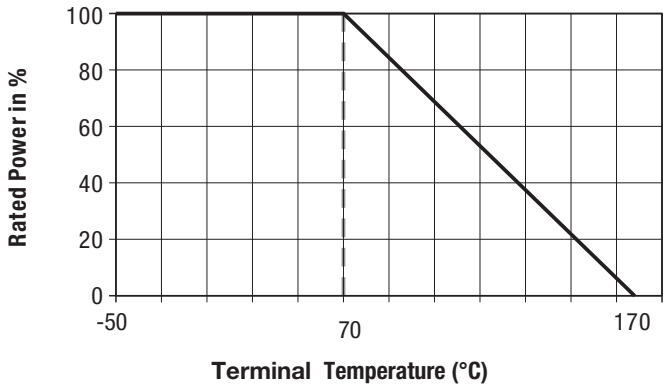


Embossed Plastic Tape Specifications



Type	A	B	W	E	F	P0	P1	P2	D0	T	Quantity(EA)
In	7.5	8	16	1.75	7.35	6	12	12	1.5	3.8	1000
Out	7.5	12.1	24	1.75	12.2	6	12	12	1.5	3.5	1000

Derating Curve



Performance Date

Iterms	Additional Requirements	Reference	Limits
Temperature Cycling	1000 Cycles(-55°C to +125°C)	JESD22 Method JA-104	±0.5%
High Temperature Exposure	1000hrs.@T=125°C.Unpowered.	MIL-STD-202 Method 108	±0.5%
Biased Humidity	1000hrs 85°C/85%RH。 Note: Specified conditions: 10% of operating power.	MIL-STD-202 Method 103	±0.5%
Operational Life	Condition D Steady State TA=125°C at rated power.	MIL-STD-202 Method 108	±1%
Solderability	245°C±5°C,5s+0.5s/-0	J-STD-002C	95% Coverage
Resistance to Soldering Heat	260°C±5°C， 10s±1s	MIL-STD-202 Method 210	±0.5%
Short Time Overload	5×Rated power for 5 s	MIL-STD-202 Method 301	±0.5%