

SB Series

Surface Mount Element Current Sense



FEATURES

- Power rating up to 5W
- Resistance values up to 0.050Ω
- Excellent long-term stability
- Tolerance: ±5%, ±2% and ±1%
- RoHS compliant



APPLICATIONS

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

SERIES SPECIFICATIONS

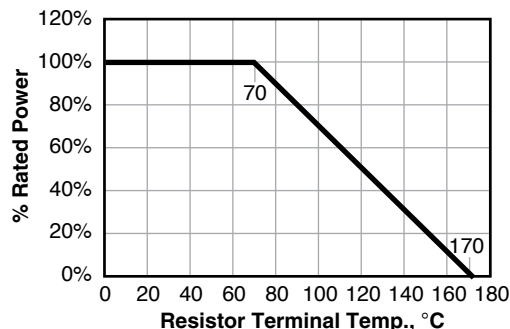
Series	Size	Resistive Material	Resistance (mΩ)	Power (W) @70°C	TCR (ppm/°C) 20°C~120°C
SBM12	4312	Manganin	2-9	3	±70*
SBK12	4312	Karma	10-15	3	±40
SBK12	4312	Karma	16-20	2	±40
SBF12	4312	FeCrAl	21-40	2	±40
SBM20	4320	Manganin	1-4	5	±70*
SBK20	4320	Karma	5-15	5	±40
SBF20	4320	FeCrAl	16-20	5	±40

*For 2-3mΩ SBM12 and 1mΩ SBM20, TCR is 240ppm.

CHARACTERISTICS

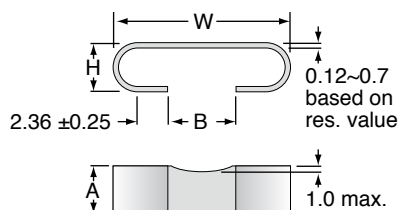
Tolerance	±1%, ±2%, ±5%
Recommended Temp. Range	-65°C to +170°C
Stability	<1.0% (in covered condition)

Derating



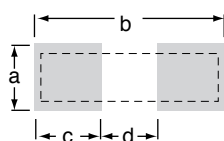
DIMENSIONS

(mm)



Size	Resistance	W	H	B	A	Qty./reel
4312	4~50	11.18 ±0.38	3.05 ±0.76	4.83 ±0.76	3.18 ±0.38	2000
	3	11.18 ±0.38	3.51 ±0.76	4.83 ±0.76	3.18 ±0.38	2000
	2	11.56 ±0.38	3.51 ±0.76	4.7 ±0.76	3.56 ±0.38	2000
4320	1~25	10.7~12	2.28~4.57	4.83 ±0.76	6.35 ±0.38	1000

Land pattern



Size	Resistance	a	b	c	d
4312	3~50	4.07	9.37	3.07	3.23
	2	4.45	9.37	3.07	3.23
4320	1~25	7.24	9.58	3.18	3.23

ORDERING INFORMATION

Series	Material	Size	Resistance	Tolerance	Tape and reel
F	FeCrAl	12 = 4312		F = 1%	
K	Karma	20 = 4320		G = 2%	
M	Manganin			J = 5%	

Standard Part Numbers

Part No.	Power	Resistance	Tol.
SBM12R005FER	3W	0.005Ω	1%
SBK12R010FER	3W	0.01Ω	1%
SBK12R015FER	3W	0.015Ω	1%
SBK12R020FER	2W	0.02Ω	1%
SBM20R002FER	5W	0.002Ω	1%
SBM20R003FER	5W	0.003Ω	1%
SBK20R005FER	5W	0.005Ω	1%
SBK20R010FER	5W	0.01Ω	1%
SBK20R015FER	5W	0.015Ω	1%
SBM12R005JER	3W	0.005Ω	5%
SBK12R010JER	3W	0.01Ω	5%
SBK12R015JER	3W	0.015Ω	5%
SBK12R020JER	2W	0.02Ω	5%
SBM20R002JER	5W	0.002Ω	5%
SBM20R003JER	5W	0.003Ω	5%
SBK20R005JER	5W	0.005Ω	5%
SBK20R010JER	5W	0.01Ω	5%
SBK20R015JER	5W	0.015Ω	5%