

**PRECISION BULK METAL® FOIL TECHNOLOGY**

# S Series

## High Performance Aerospace and Instrumentation Resistors

### FEATURES

From -55°C to +125°C with 25 °C as reference:

•S102K Series Nominal Temperature Coefficient of Resistance:

Resistance value	80 Ω to 100KΩ	50Ω to 80Ω	1Ω to 50Ω
TCR	1±2.5 ppm	1±3.5 ppm	1±4.5 ppm

•S102C Series Nominal Temperature Coefficient of Resistance:

Resistance value	80 Ω to 150KΩ	50Ω to 80Ω	1Ω to 50Ω
TCR	2±2.5 ppm	2±3.5 ppm	2±4.5 ppm

•Selected TCR Tracking: to 0.5 ppm/°C (matched sets)

- Power Rating: 0.6 to 2.0 Watts at +70°C; 0.3 to 1.0 Watts at +125°C (depending on model)
- Load Life Stability:± 50ppm MaxΔR (@70°C, 2,000 hrs at rated power)
- Resistance Tolerance (Initial Resistance Accuracy): ±0.005% tightest to ±1.0% loosest (depends on resistor value)
- Resistance Range: 0.5Ω to 1 MΩ
- Current Noise: 0.010 μV (RMS) / Volt of Applied Voltage
- Thermal EMF: 0.1 μV / °C Maximum; 0.05 μV / °C Typical; 1 μV / Watt (Model S102C, S102K)
- Rise/Decay Time: 1.0 Nanosecond @ 1KΩ
- For better TCR performance please review the Z201 datasheet.
- Terminal finishes available: lead free or tin/lead alloy.



**RoHS**  
COMPLIANT

	Model	Value Range	Max Voltage	Power		Dimensions	Tolerances Available
				70°C	125°C		
	<b>S102C (S102J)<sup>1</sup></b>	1Ω to 150KΩ*	300	0.6W	0.3W	W: 0.105 ±0.010 L: 0.300 ±0.010 H: 0.326 ±0.010 ST: 0.010 Min SW: 0.040 ±0.005 LL: 1.000 ±0.125 LS: 0.150 ±0.005	±0.005%: 50Ω - 1MΩ ±0.01%: 10Ω - 1MΩ ±0.02%: 5Ω - 1MΩ ±0.05%: 2Ω - 1MΩ ±0.1%: 1Ω - 1MΩ ±0.25%: 1Ω - 1MΩ ±0.5%: 1Ω - 1MΩ ±1.0%: 0.5Ω - 1MΩ
	<b>S102K (S102L)<sup>1</sup></b>	1Ω to 100KΩ		0.4W	0.2W		
	<b>S104D</b>	1Ω to 500KΩ	350	1.0W	0.5W	W: 0.160 Max L: 0.575 Max H: 0.413 Max ST: 0.035 ±0.005 SW: 0.050 ±0.005 LL: 1.000 ±0.125 LS: 0.400 ±0.020	
	<b>S104K</b>	1Ω to 300KΩ		0.6W	0.3W		
	<b>S105D</b>	1Ω to 750KΩ	350	1.5W	0.75W	W: 0.160 Max L: 0.820 Max H: 0.413 Max ST: 0.035 ±0.005 SW: 0.050 ±0.005 LL: 1.000 ±0.125 LS: 0.650±0.020	
	<b>S105K</b>	1Ω to 500KΩ		0.8W	0.4W		
	<b>S106D</b>	0.5Ω to 1MΩ	500	2.0W	1.0W	W: 0.260 Max L: 1.200 Max H: 0.413 Max ST: 0.035 ±0.005 SW: 0.050 ±0.005 LL: 1.000 ±0.125 LS: 0.900±0.0	
	<b>S106K</b>	0.5Ω to 600KΩ		1.0W	0.5W		

<sup>1</sup>S102J and S102L resistors have a 0.2" lead space.

**\* FCE can supply single resistors to 250K**

**approved to DSCC Dwg. 89039**

**For an axial lead version of the S Series, we also supply the TXA Series**

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