

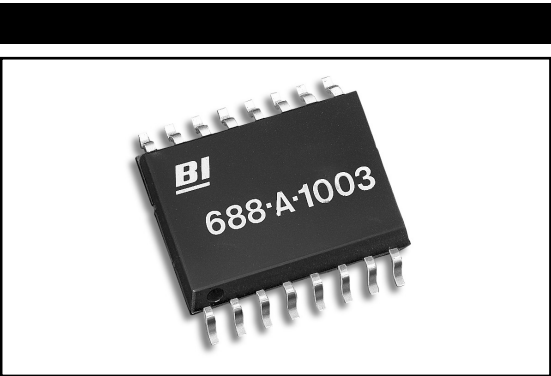
MODEL 688

Precision Thin Film

.300" Dual In-Line

Surface Mount

Resistor Networks



FEATURES

- **Unique passivation coating eliminates moisture concerns** and allows for use in applications traditionally restricted to tantalum nitride
- Outperforms other thin film resistor materials providing excellent tolerances, ratio matching, temperature coefficient, and temperature tracking
- Improved performance over silicon substrates in stray capacitance, frequency response and stability

ELECTRICAL

Operating Temperature Range	-55°C to +125°C
Resistance Voltco	≈0
Interlead Capacitance	<2pF
Operating Voltage, Maximum	100Vdc or √PR
Insulation Resistance	≥10,000 Megohms
Noise, Maximum (MIL-STD-202, Method 308)	-40dB

ENVIRONMENTAL

Thermal Shock plus Power Conditioning	ΔR 0.25%
Short Time Overload	ΔR 0.10%
Terminal Strength	ΔR 0.10%
Moisture Resistance	ΔR 0.20%
Mechanical Shock	ΔR 0.25%
Vibration	ΔR 0.25%
Low Temperature Storage	ΔR 0.10%
High Temperature Exposure	ΔR 0.10%
Load Life, 1,000 Hours	ΔR 0.10%
Resistance to Solder Heat	ΔR 0.10%
Dielectric Withstanding Voltage	100V for 1 minute
Temperature Exposure, Maximum	215°C for 3 minutes
Marking Permanency	MIL-STD-202, Method 215)
Lead Solderability	MIL-STD-202, Method 208)
Flammability	UL-94V-0 Rated
Storage Temperature Range	-65°C to +125°C

Specifications subject to change without notice.

MECHANICAL

Lead Plating	85/15 Tin Lead
Lead Material	Copper Alloy
Lead Configuration	Gull Wing
Lead Coplanarity	0.004" (0.102mm)
Substrate Material	Alumina
Resistor Material	Nichrome
Body Material	Molded Epoxy

TOLERANCES

Accuracy Code

	B	D	F
Absolute Resistance Tolerances, at 25°C	0.1%	0.5%	1.0%
Ratio	0.1%	0.1%	0.5%
Temperature Coefficient of Resistance			±25ppm/°C
Temperature Coefficient of Resistance, Tracking			±5ppm/°C

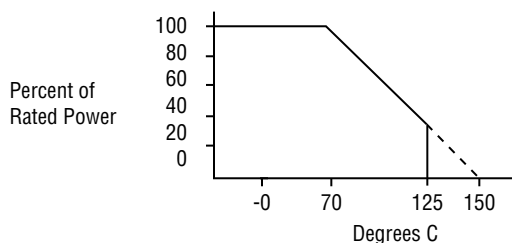
STANDARD RESISTANCE VALUES, OHMS

Model	Ohms	Code
688A	50K	5002
	100K	1003
688B	100K	1003

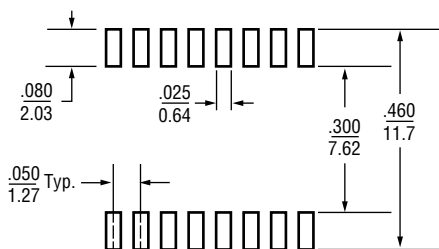
POWER DISSIPATION, (WATTS) AT 70°C

Model	Package	Resistor
688	.7	.1

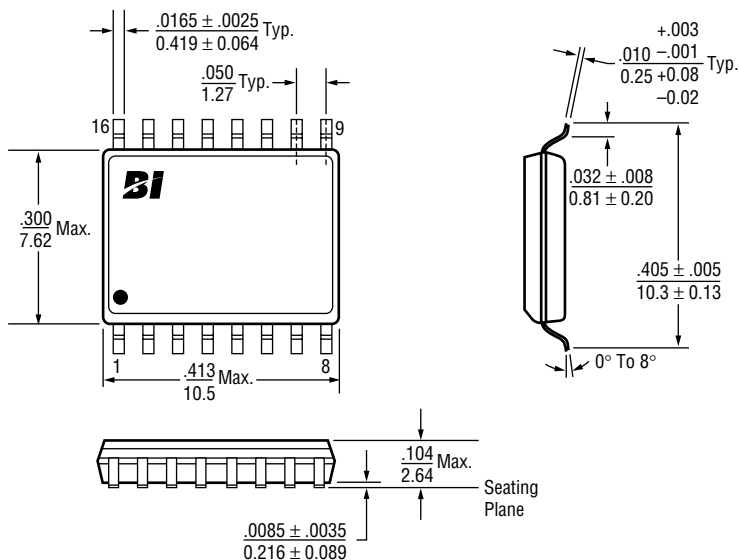
POWER DERATING CURVE



SOLDER PAD LAYOUT (Inch/mm)



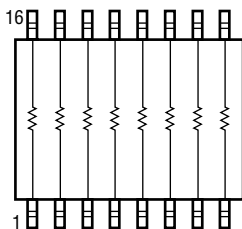
OUTLINE DIMENSIONS (Inch/mm)



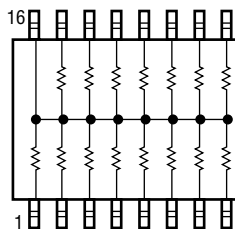
Note: Leads are within .005/0.13 of true position.
Maximum allowable mold excursion = 0.006"

SCHEMATICS

688A - Isolated Resistors



688B - Bussed Resistors



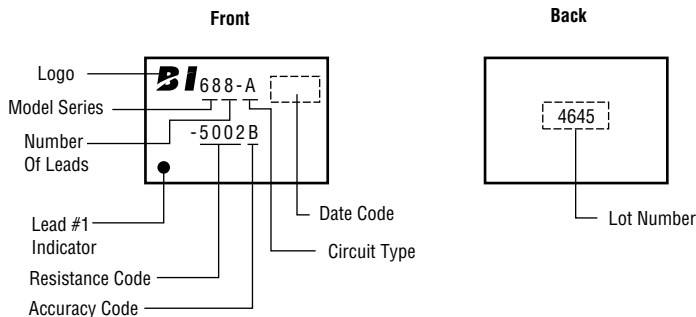
Note: Custom circuits are available. Consult factory.

APPLICABLE DOCUMENTS

MIL-R-83401 — Resistor Networks, Fixed, Film, General Specifications

MIL-STD-202 — Test Methods for Electronics and Electrical Component Parts

TYPICAL PART MARKING



PACKAGING

Standard: Magazines

All units oriented with lead #1 to the same side.

Magazine: Capacity = 50 Units

Option: Embossed Tape & Reel

Reel:	Diameter	=	7" Reel	13" Reel
	Capacity	=	500 Units	1,500 Units

ORDERING INFORMATION

