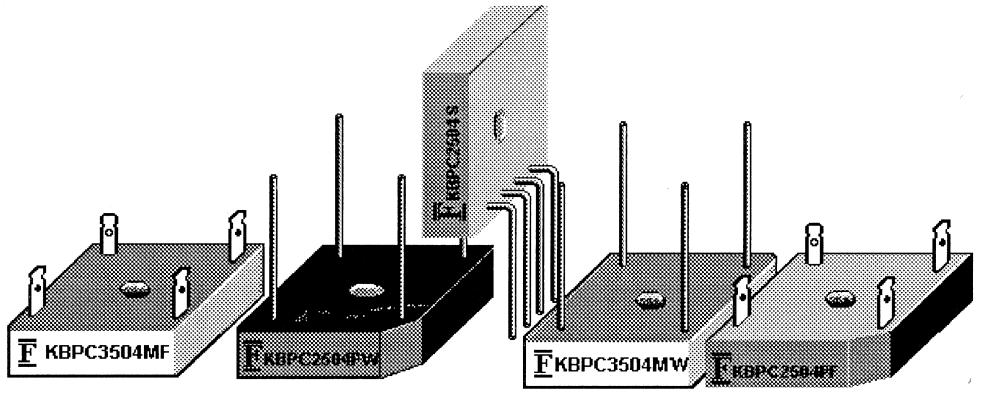
Data Sheet

25 Amp Glass Passivated SINGLE PHASE SILICON BRIDGE

GBPC2500~2512

Description



GBPC

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High surge current capability
- Ideal for printed circuit boards

Mechanical Data

- Case: Molded plastic body over passivated junctions
- Terminals: Solderable per MIL-STD-202, method 208
- Polarity: As marked on body
- Mounting position: Any
- Weight: 0.63 ounce, 18 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

	SYMBOL	GBPC 2500	GBPC 2501	GBPC 2502	GBPC 2504	GBPC 2506	GBPC 2508	GBPC 2510	GBPC 2512	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	1200	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	840	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	1200	V
Maximum Average Forward Rectified Current T_C=70°C	$I_{(AV)}$	25.0								A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	300								A
Maximum Instantaneous Forward Voltage @ 12.5 A	V_F	1.1								V
Maximum DC Reverse Current @T_J=25°C At Rated DC Blocking Voltage @T_J=125°C	I_R	5.0 500								uA
Rating for fusing (t < 8.3ms)	I^2t	374								A^2S
Typical junction Capacitance (Note 1)	C_J	130								pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	1.3								°C/W
Operating Junctionand Storage Temperature Range	T_J, T_{STG}	-55 to + 150								°C

NOTES : (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.
(2) Thermal Resistance form junction to case mounted on P.C.B with 0.5 x 0.5"(13x13mm) copper pads.

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FIG.1 - FORWARD CURRENT DERATING CURVE

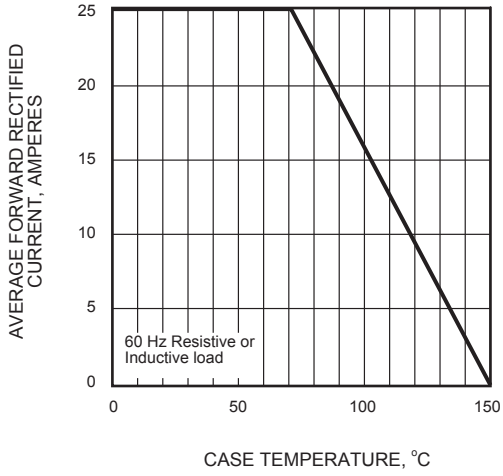


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

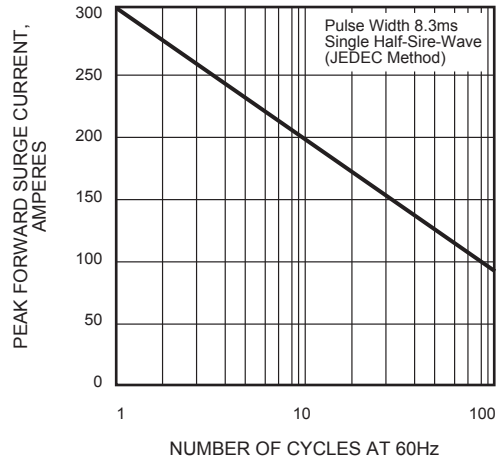


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

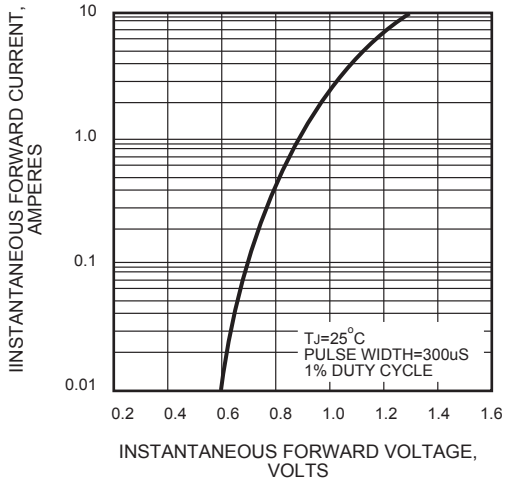


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

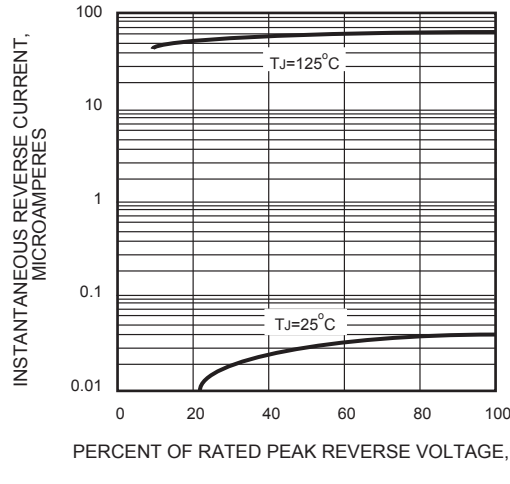
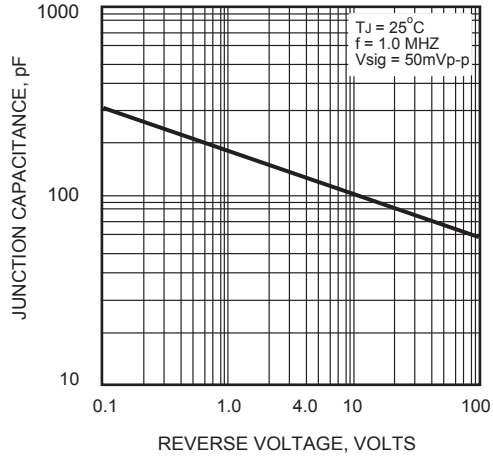


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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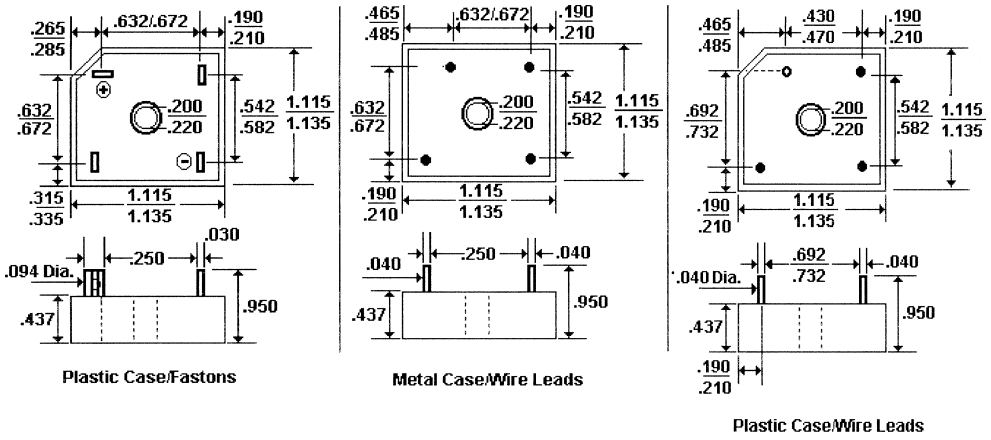

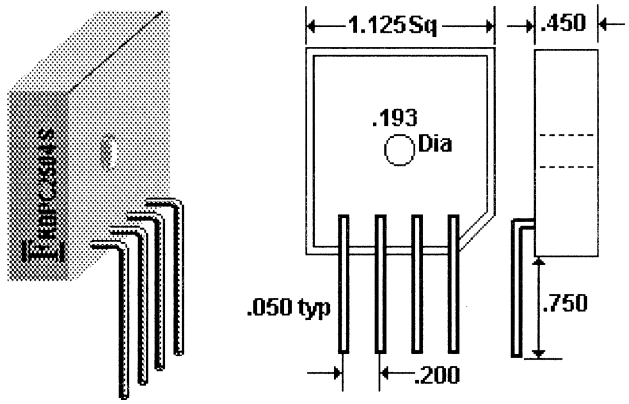

Ratings at 25 Deg. C ambient temperature unless otherwise specified.

Single Phase Half Wave, 60 HZ Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.

NOTES:
1. Corrosion-Resistant Terminals Designed for .250" Female Quick Connect Wrap Around or Solder.
2. A Thin Film of Silicone Thermal Compound is Recommended Between Bridge and Mounting Surface for Improved Thermal Conduction.
3. These FCI Bridges Are Also Available in Fast Recovery, In Positive and Negative Center Tap and in Double Configurations. Consult with FCI for Your Special Requirements.

FCI Semiconductor *Data Sheet*

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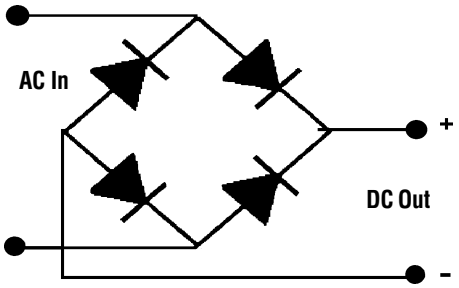

Case - Metal or Molded Plastic

Terminals - Plated .25" Faston or Plated Copper Wire Leads .040" Diameter

Weight - 0.706 Ounces, 20 Grams

Mounting Position - Any with Bolt Down with Silicone Thermal Compound Between Bridge and Mounting Surface for Optimum Heat Transfer

Mounting Torque - 20 Inch Pound Max

Ordering Information

FCI'S GBPC Series of Bridge Can be Ordered with Options on Terminals and case Materials

How To Specify Case Material and Terminal Options:

- For Metal Case, Order Suffix **(1) "M"**
- For Plastic Case, Order Suffix **(1) "P"**
- For Faston Terminals, Order Suffix **(2) "F"**
- For Wire Lead Terminals, Order Suffix **(2) "W"**

GBPC Series Examples

To Order a 25 Amp, 400 Volt Bridge with Faston Leads and a Plastic Case:

Specify GBPC 2504PF-----Where" P " =Plastic and " F " =Faston Terminals

To Order a 35 Amp, 800 Volt Bridge with Wire Leads and a Metal Case:

Specify GBPC 3508MW-----Where" M " =Metal and " W " =Wire Lead Terminals

To Order a 15 Amp, 200 Volt, UL Recognized Bridge with Wire Leads and a Plastic Case:

Specify GBPC 1502PWU-----Where" P " =Plastic and " W " =ire Lead Terminals and " U "= UL Recognized

NOTE: Fast Recovery Bridges (Diodes) Are Available; Please Contact FCI Components.

GBPC " S " Series Examples

To Order Bridges with the "In-Line" Pin Configuration, Select the Current and Voltage Desired and Add **"S"** as the Suffix, as shown in the following example.

To Order a 35 Amp, 800 Volt Bridge with In-Line Wire Leads:

Specify GBPC 3508S-----Where" S " = In line Wire Lead Terminals