

# **SEMICONDUCTOR** TECHNICAL DATA

# **DF005 ~ DF10**

## GLASS PASSIVATED CHIP SINGLE-PHASE BRIDGE RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

## **Features**

- Ideal for printed circuit board
- Glass passivated chip junction
- High temperature soldering guaranteed: 260°C/10 seconds at 5 lbs tension

## **Mechanical Data**

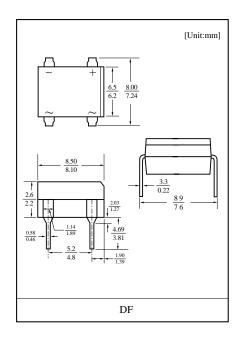
• Terminals: Plated leads, solderable per MIL-STD-202, method 208

• Case: Molded with UL-94Class V-0 recognized

flame retartant epoxy

• Polarity: Polarity symbol marked on body

Mounting Position: Any



# **Maximum Ratings and Electrical Characteristics**

Single-phase, half-wave, 60Hz, resistive or inductive load.

Ratings at 25°C, unless otherwise stated.

Characteristic	Symbols	DF005	DF01	DF02	DF04	DF06	DF08	DF10	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current at $T_{_{A}}\!\!=\!\!40^{\circ}\!\mathrm{C}$	I <sub>(AV)</sub>	1.0							Amp
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load	I <sub>FSM</sub>	50.0							Amps
Maximum forward voltage at forward current perelement 1.0A	V <sub>F</sub>	1.1							Volts
I <sup>2</sup> t-rating for fusion (t<8.3mS)	l²t	10.0							A <sup>2</sup> S
Maximum DC reverse current at rated DC blocking voltage T <sub>A</sub> =125°C	I <sub>R</sub>	10.0 500.0							μА
Typical junction capacitance (Note 1)	C <sub>J</sub>	25.0							ρF
Typical thermal resistance (Note 2)	R <sub>⊕JA</sub>	40.0							℃W
Operating temperature range	T <sub>J</sub>	-55 to +125							$^{\circ}$
Storage temperature range	T <sub>STG</sub>	-55 to +150							$^{\circ}$

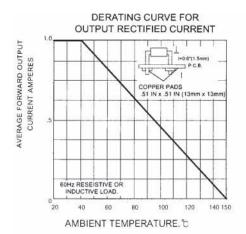
- (1) Measured at 1.0MHz and applied reverse voltage of 4.0 VDC
- (2) Thermal resistance from junction to ambient on P.C. Board Mounted

Revision No: 0

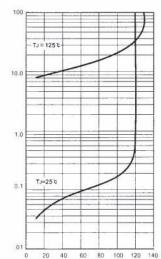
JUNCTIONCAPACITANCE.pF

# **DF005 ~ DF10**

## **RATINGS AND CHARACTERISTIC CURVES**

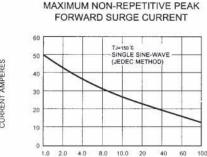






PERCENT OF RATED PEAK REVERSE VOLTAGE, %

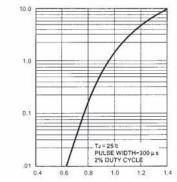




NUMBER OF CYCLES AT 60Hz

# INSTANTANEOUS FORWARD CURRENT,

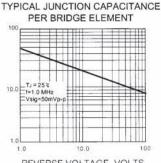
### TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT



PERCENT OF RATED PEAK REVERSE VOLTAGE, **VOLTS** 



First Silicon



REVERSE VOLTAGE, VOLTS