

### DF005 THRU 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 ℃/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

3.85 (9.3) .020(.508) .205(5.2) .385 (9.3) .355 (9.3) .205(5.2) .205(5.2) .245 (6.2)

D F

Dimensions in inches and (millimeters)

.170 (4.3)

.025 (.06)

.015 (.04)

120 (3.04)

#### **Maximum Ratings and Electrical Characteristics**

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

Ratings at 25°C, unless otherwise stated.

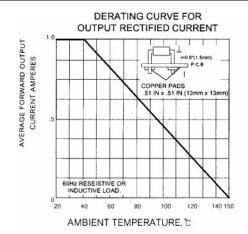
For capacitive load. Derate current by 20%

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 $\rm T_{A}\!=\!40^{\circ}C$	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)	I²t	10.0							A <sup>2</sup> S
	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							°C/W
Operating temperature range	T <sub>J</sub>	-55 to +125							$^{\circ}$
Storage temperature range	T <sub>stg</sub>	-55 to +150							$^{\circ}\mathbb{C}$

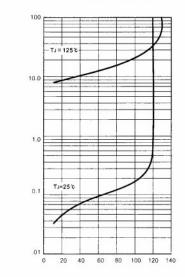
#### Notes:

- (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

#### **RATINGS AND CHARACTERISTIC CURVES**



TYPICAL REVESE CHARACTERISTICS PER BRIDGE ELEMENT

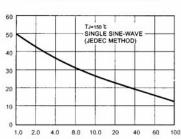


JUNCTIONCAPACITANCE.pF

PERCENT OF RATED PEAK REVERSE VOLTAGE, %

#### MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

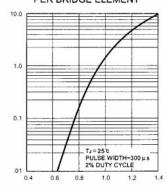




NUMBER OF CYCLES AT 60Hz

# INSTANTANEOUS FORWARD CURRENT, AMPERES

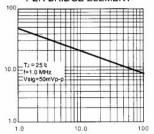
## TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT



PERCENT OF RATED PEAK REVERSE VOLTAGE, VOLTS

CAPACITANCE.pF

# TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT



REVERSE VOLTAGE, VOLTS