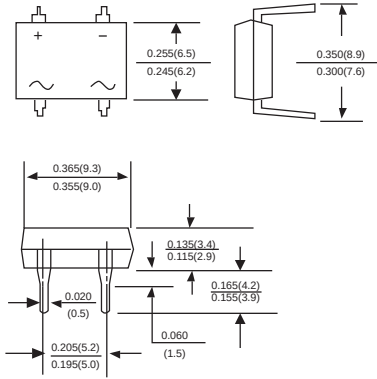


**GAIA TECH**

DF005 THRU DF10 AND DB101 THRU DB107

SILICON BRIDGE RECTIFIERS

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

DB-1

Dimensions in inches and (millimeters)

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds, 5 lbs. (2.3kg) tension

MECHANICAL DATA**Case:** Molded plastic body**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026**Polarity:** Polarity symbols marked on case**Mounting Position:** Any**Weight:** 0.04 ounce, 1.0 grams**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for current capacitive load derate by 20%.

	SYMBOLS	DF005 DB101	DF01 DB102	DF02 DB103	DF04 DB104	DF06 DB105	DF08 DB106	DF10 DB107	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS
Maximum average forward output rectified current 0.06" (1.5mm) lead length at $T_A = 40^\circ\text{C}$ (Note 2)	$I_{(AV)}$	1.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50.0							Amps
Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	10							A ² s
Maximum instantaneous forward voltage drop per bridge element at 1.0A	V_F	1.1							Volts
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	I_R	10							μA
		0.5							mA
Typical Junction Capacitance (Note 1)	C_J	25							pF
Typical Thermal Resistance (Note 2)	R_{qJA}	40							°C/W
Operating junction temperature range	T_J	-65 to +150							°C
storage temperature range	T_{STG}	-65 to +150							°C

NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.

2. Unit mounted on P.C. board with 0.51" x 0.51" (13x13mm) copper pads.

RATINGS AND CHARACTERISTIC CURVES DF005 THRU DF10 AND DB101 THRU DB107

FIG. 1- FORWARD CURRENT DERATING CURVE

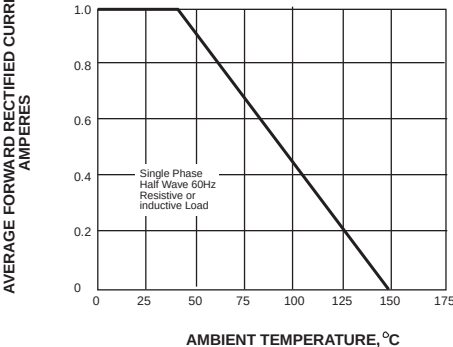


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

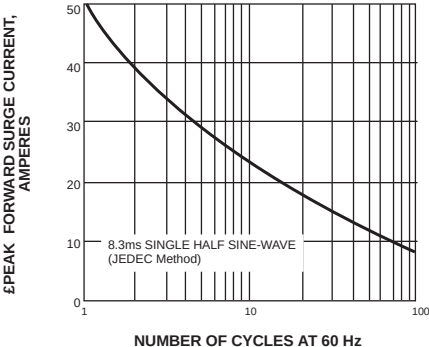


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

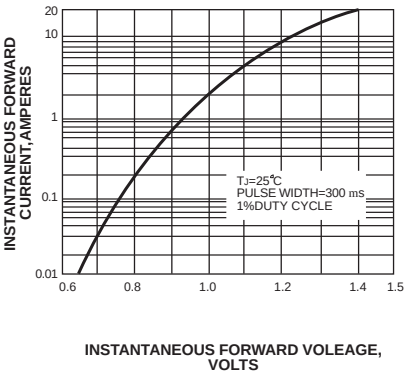


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

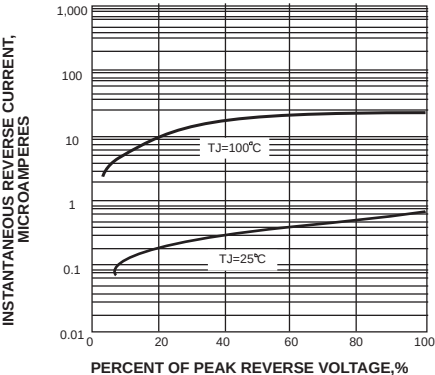


FIG. 5-TYPICAL JUNCTION CAPACITANCE

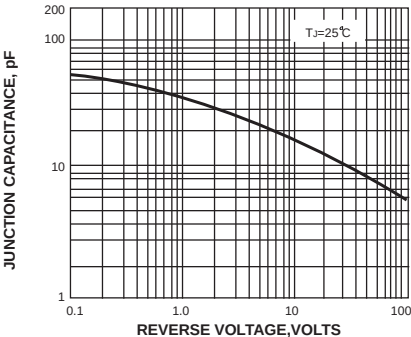


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

