

DFB2505, DFB2510, DFB2520, DFB2540, DFB2560, DFB2580, DFB25100

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$, Unless otherwise specified) (Note 1)

Symbol	Parameter	Value							Unit
		DFB2505	DFB2510	DFB2520	DFB2540	DFB2560	DFB2580	DFB25100	
V_{RRM}	Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
V_{RMS}	Maximum RMS Voltage	35	70	140	280	420	560	700	V
V_{DC}	Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
$I_{(AV)}$	Maximum Average Forward Rectified Current	25							A
I_{FSM}	Peak Forward Surge Current (8.3 ms Single Half-wave)	350							A
$R_{\theta JC}$	Typical Thermal Resistance (Note 2)	4.75							$^\circ\text{C}/\text{W}$
T_J	Operating Temperature Range	-55 to +150							$^\circ\text{C}$
T_{STG}	Storage Temperature Range	-55 to +150							$^\circ\text{C}$

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. Single-phase, half-wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.
2. Device mounted on 4 inch x 6 inch x 0.25 inch Al-plate heat sink.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Test Conditions	Value	Unit
V_F	Maximum Forward Voltage	12.5 A	1.0	V
	Instantaneous Forward Voltage	25 A	1.1	
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	10	μA
		$T_A = 125^\circ\text{C}$	500	
I^2t	Rating for Fusing ($t < 8.3$ ms)		508	A^2s
C_J	Typical Junction Capacitance per Leg (Note 3)		110	pF

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

3. Measured at 1 MHz and applied reverse bias of 4.0 V DC.

TYPICAL PERFORMANCE CHARACTERISTICS

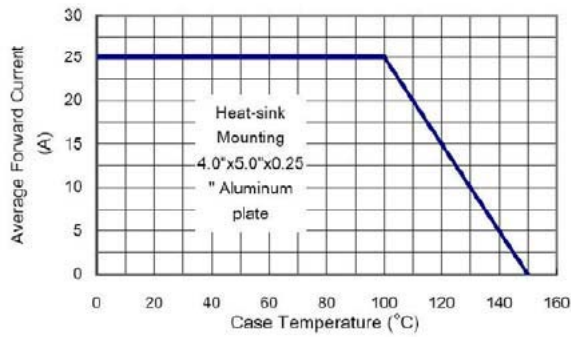


Figure 1. Maximum Derating Curve for Output Current

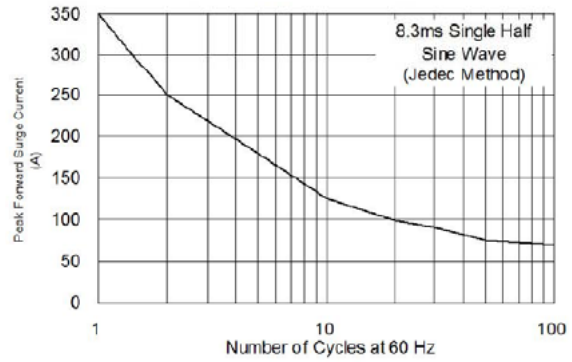


Figure 2. Maximum Forward Surge Current per Leg

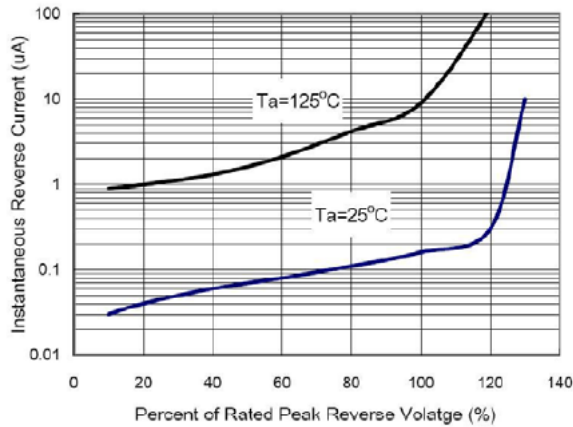


Figure 3. Typical Reverse Characteristics per Leg

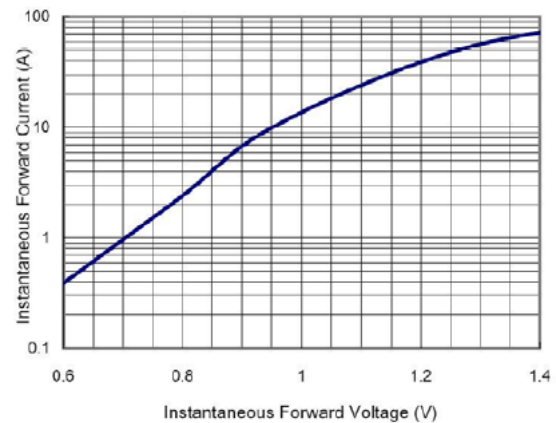


Figure 4. Typical Forward Characteristics per Leg

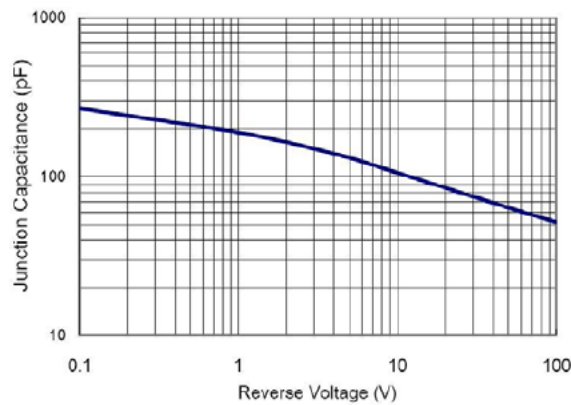


Figure 5. Typical Junction Capacitance

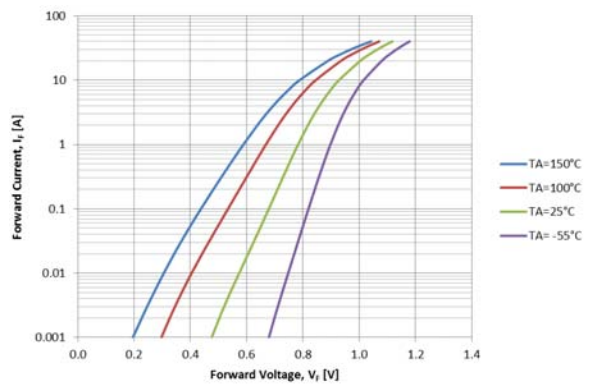
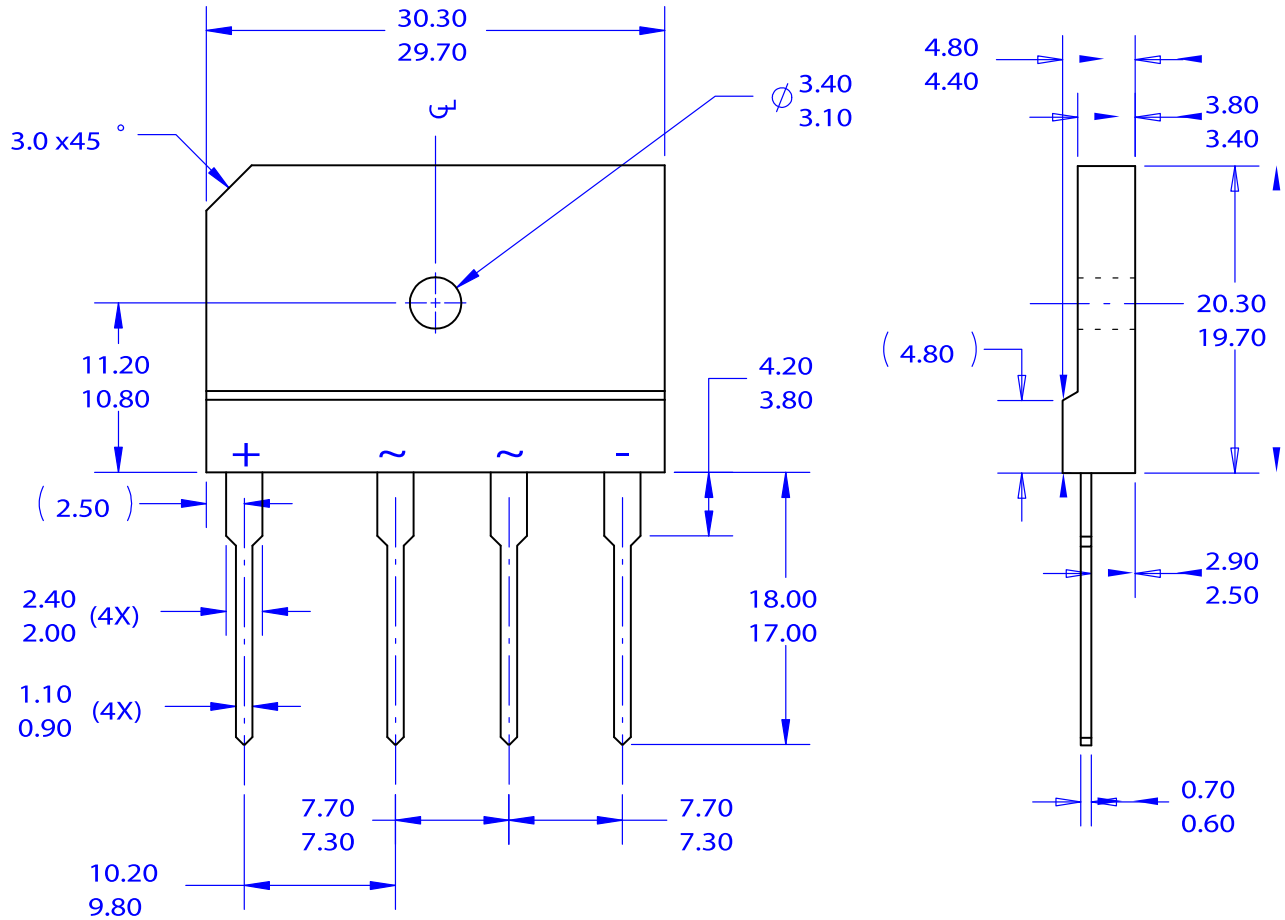


Figure 6. Forward Voltage Characteristics

MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

SIP4 30x20
CASE 127EP
ISSUE O

DATE 31 DEC 2016



NOTES:

- A. THIS PACKAGE DOES NOT CONFORM TO ANY STANDARDS.
- B. ALL DIMENSIONS ARE IN MILLIMETERS.
- C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.

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