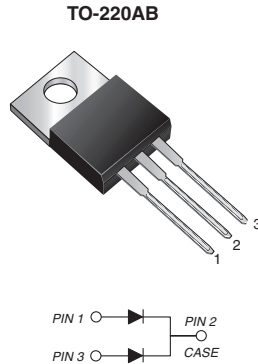


Dual Common Cathode Ultrafast Plastic Rectifier



FEATURES

- Power pack
- Glass passivated pellet chip junction
- Ultrafast recovery time
- Low switching losses, high efficiency
- High forward surge capability
- Solder dip 275 °C max., 10 s per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

TYPICAL APPLICATIONS

For use in high frequency rectifier of switching mode power supplies, inverters, freewheeling diodes, DC/DC converters, and other power switching application.

MECHANICAL DATA

Case: TO-220AB

Molding compound meets UL 94V-0 flammability rating
Base P/N-E3 - RoHS-compliant, commercial grade

Terminals: matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: as marked

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	16 A
V_{RRM}	50 V, 100 V, 150 V, 200 V
I_{FSM}	125 A
t_{rr}	35 ns
V_F at I_F	0.895 V
T_J max.	150 °C
Package	TO-220AB
Diode variation	Common cathode

MAXIMUM RATINGS ($T_A = 25\text{ °C}$ unless otherwise noted)						
PARAMETER	SYMBOL	GI2401	GI2402	GI2403	GI2404	UNIT
Max. repetitive peak reverse voltage	V_{RRM}	50	100	150	200	V
Max. RMS voltage	V_{RMS}	35	70	105	140	V
Max. DC blocking voltage	V_{DC}	50	100	150	200	V
Max. average forward rectified current at $T_C = 100\text{ °C}$	$I_{F(AV)}$	16				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	125				A
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150				°C



ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)									
PARAMETER	TEST CONDITIONS		SYMBOL	GI2401	GI2402	GI2403	GI2404	UNIT	
Max. instantaneous forward voltage per diode	$I_F = 4\text{ A}$	$T_J = 25\text{ }^\circ\text{C}$	V_F	0.900				V	
	$I_F = 8\text{ A}$	$T_J = 25\text{ }^\circ\text{C}$		0.975					
	$I_F = 4\text{ A}$	$T_J = 100\text{ }^\circ\text{C}$		0.800					
	$I_F = 8\text{ A}$	$T_J = 100\text{ }^\circ\text{C}$		0.895					
Max. DC reverse current at rated DC blocking voltage per diode			I_R	$T_C = 25\text{ }^\circ\text{C}$		50		5.0	μA
				$T_C = 100\text{ }^\circ\text{C}$		150		500	
Max. reverse recovery time per diode	$I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $t_{rr} = 0.25\text{ A}$		t_{rr}	35				ns	
Typical junction capacitance per diode	4.0 V, 1 MHz		C_J	85				pF	

THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)							
PARAMETER	SYMBOL	GI2401	GI2402	GI2403	GI2404	UNIT	
Typical thermal resistance per diode ⁽¹⁾	$R_{\theta JA}$	16				$^\circ\text{C/W}$	
	$R_{\theta JC}$	2.2					

Note

⁽¹⁾ Thermal resistance from junction to ambient and from junction to case per leg mounted on heatsink

ORDERING INFORMATION (Example)						
PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE	
TO-220AB	GI2401-E3/45	1.85	45	50/tube	Tube	



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

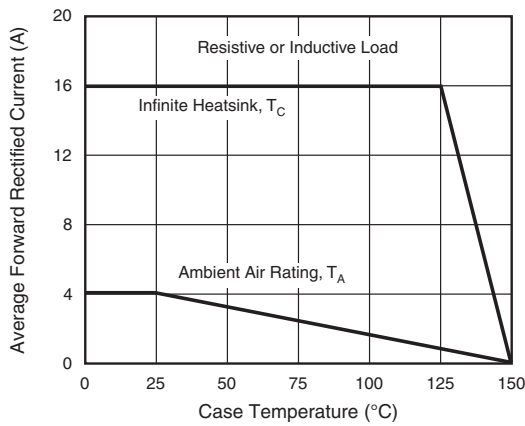


Fig. 1 - Max. Forward Current Derating Curve

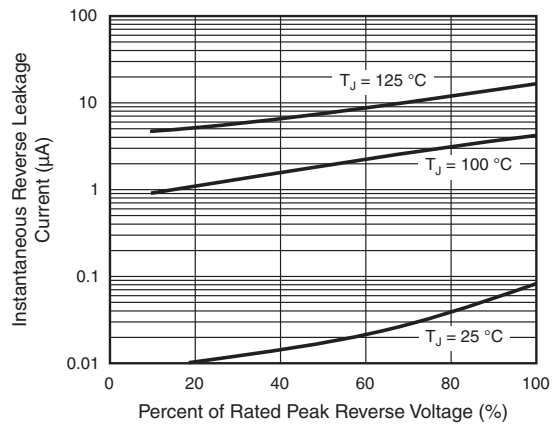


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

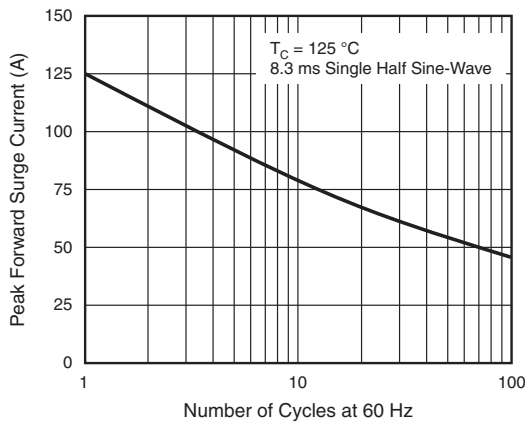


Fig. 2 - Max. Non-Repetitive Peak Forward Surge Current Per Diode

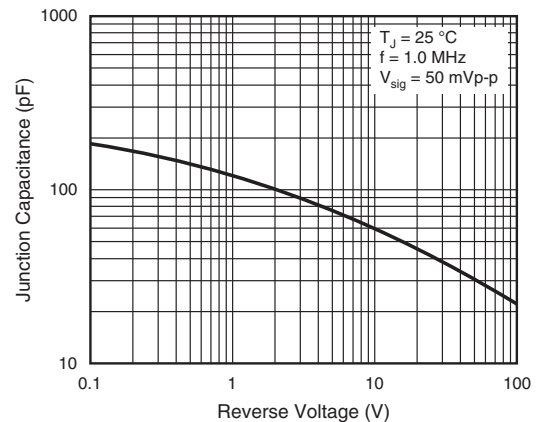


Fig. 5 - Typical Junction Capacitance Per Diode

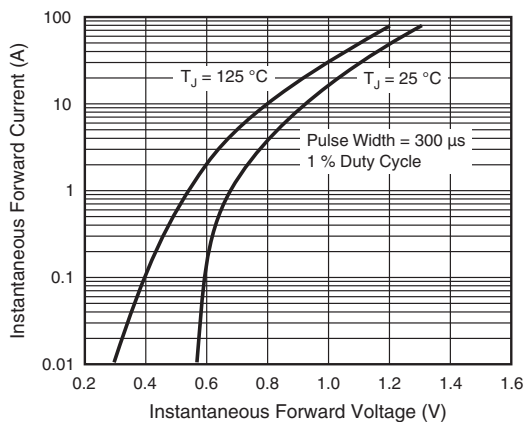
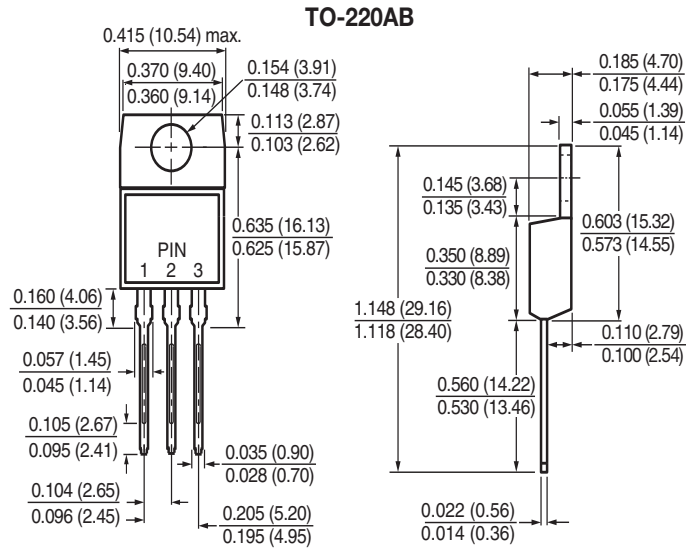


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode



PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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