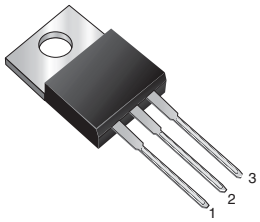
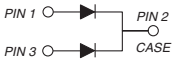
Dual Common Cathode Ultrafast Plastic Rectifier

TO-220AB





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 °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 °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 °C unless otherwise noted)								
PARAMETER	**TEST CONDITIONS**		**SYMBOL**	**GI2401**	**GI2402**	**GI2403**	**GI2404**	**UNIT**
Max. instantaneous forward voltage per diode	I_F = 4 A	T_J = 25 °C	V_F	0.900				V
	I_F = 8 A	T_J = 25 °C		0.975				
	I_F = 4 A	T_J = 100 °C		0.800				
	I_F = 8 A	T_J = 100 °C		0.895				
Max. DC reverse current at rated DC blocking voltage per diode		T_C = 25 °C	I_R	50			5.0	μA
		T_C = 100 °C		150			500	
Max. reverse recovery time per diode	I_F = 0 .5 A, I_R = 1.0 A, I_{rr} = 0.25A		t_{rr}	35				ns
Typical junction capacitance per diode	4.0 V, 1 MHz		C_J	85				pF

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)							
PARAMETER	**SYMBOL**	**GI2401**	**GI2402**	**GI2403**	**GI2404**	**UNIT**
Typical thermal resistance per diode (1)	$R_{\theta JA}$	16				°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

ODERING 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 °C unless otherwise noted)

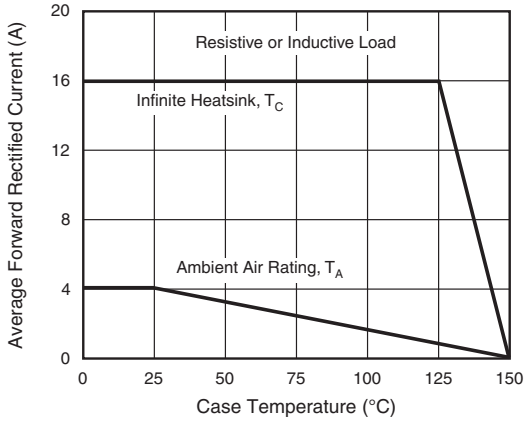


Fig. 1 - Max. Forward Current Derating Curve

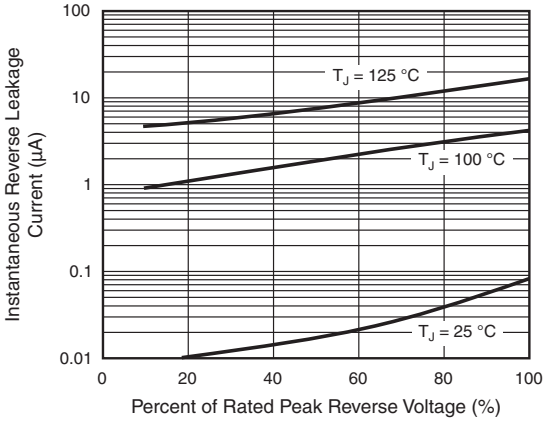


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

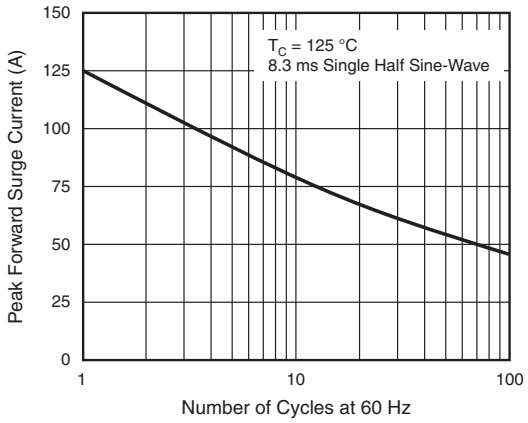


Fig. 2 - Max. Non-Repetitive Peak Forward Surge Current Per Diode

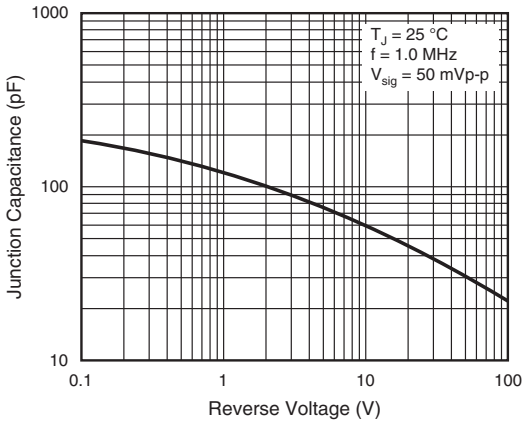


Fig. 5 - Typical Junction Capacitance Per Diode

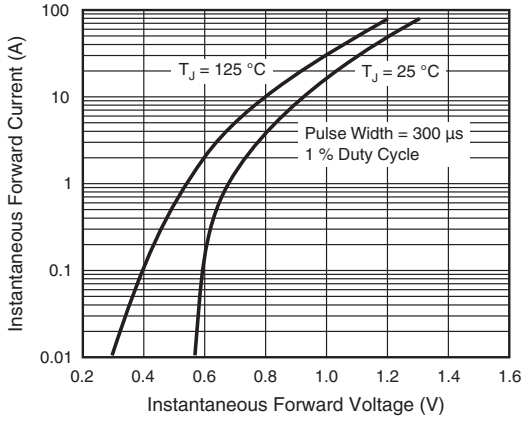
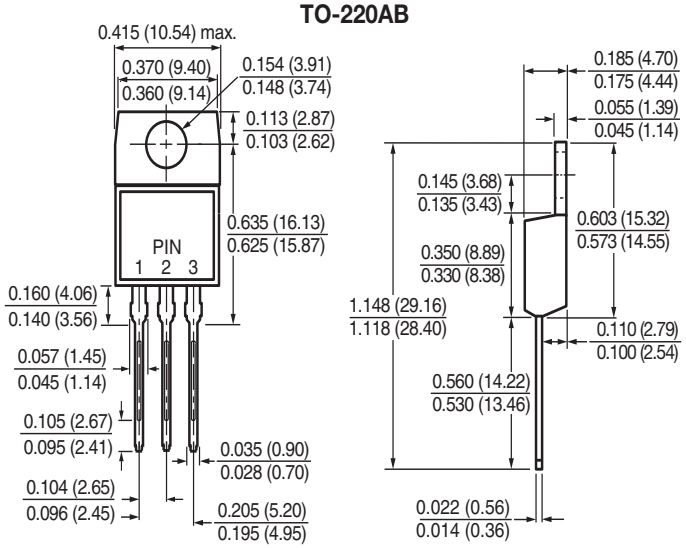


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

TO-220AB



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