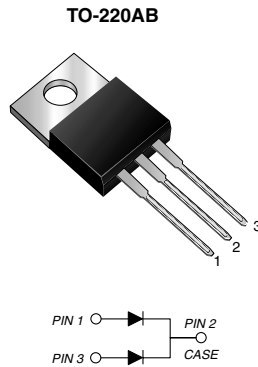


Dual Common-Cathode Ultrafast Plastic Rectifier



FEATURES

- Glass passivated chip junction
- Ultrafast recovery time
- Low switching losses, high efficiency
- High forward surge capability
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC


RoHS
COMPLIANT

TYPICAL APPLICATIONS

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

PRIMARY CHARACTERISTICS

$I_{F(AV)}$	16 A
V_{RRM}	50 V to 200 V
I_{FSM}	125 A
t_{rr}	35 ns
V_F	0.895 V
$T_J \text{ max.}$	150 °C

MECHANICAL DATA

Case: TO-220AB

Epoxy meets UL 94V-0 flammability rating

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

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test, HE3 suffix for high reliability grade (AEC Q101 qualified), meets JESD 201 class 2 whisker test

Polarity: As marked

MAXIMUM RATINGS ($T_A = 25\text{ °C}$ unless otherwise noted)

PARAMETER	SYMBOL	GI2401	GI2402	GI2403	GI2404	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	V
Maximum 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 °C unless otherwise noted)							
PARAMETER	TEST CONDITIONS	SYMBOL	GI2401	GI2402	GI2403	GI2404	UNIT
Maximum 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			
Maximum 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			
Maximum 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 _{θJA}	16				°C/W
	R _{θJC}	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
TO-220AB	GI2401HE3/45 ⁽¹⁾	1.85	45	50/tube	Tube

Note:

(1) Automotive grade AEC Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

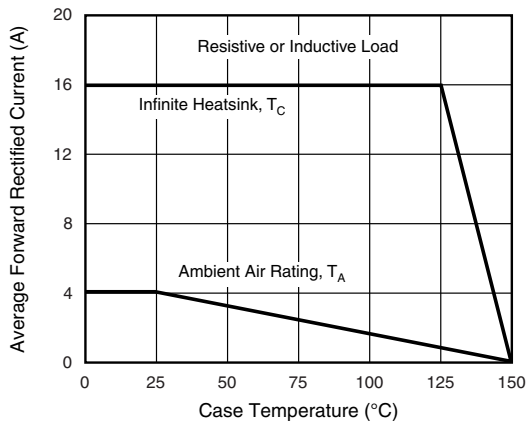


Figure 1. Maximum Forward Current Derating Curve

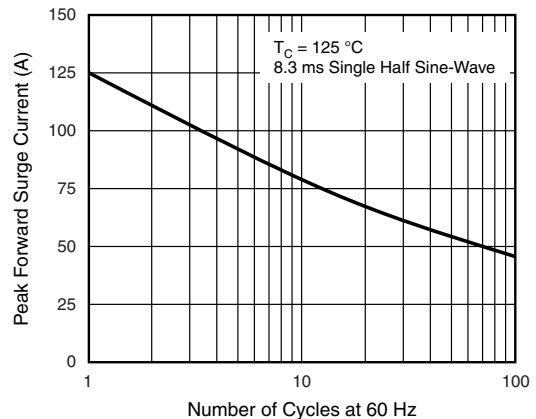


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

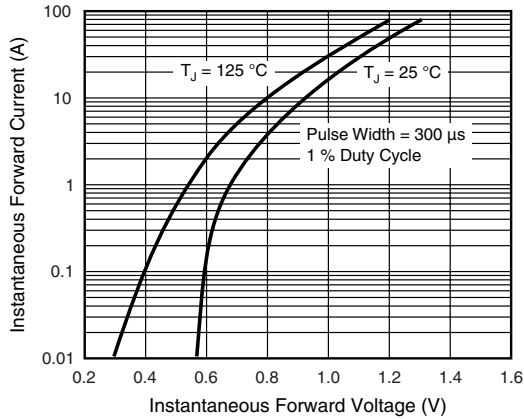


Figure 3. Typical Instantaneous Forward Characteristics Per Diode

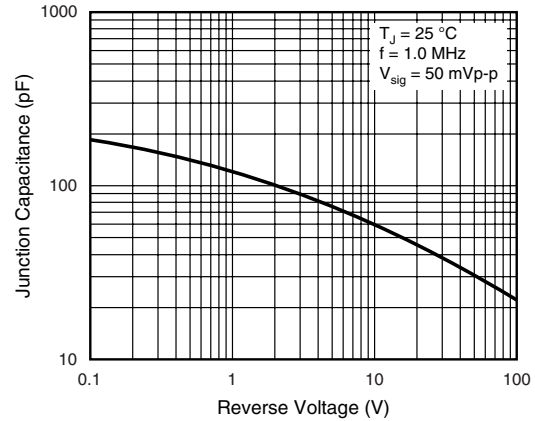


Figure 5. Typical Junction Capacitance Per Diode

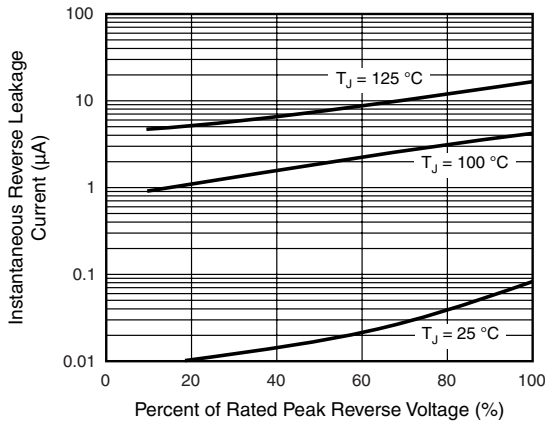
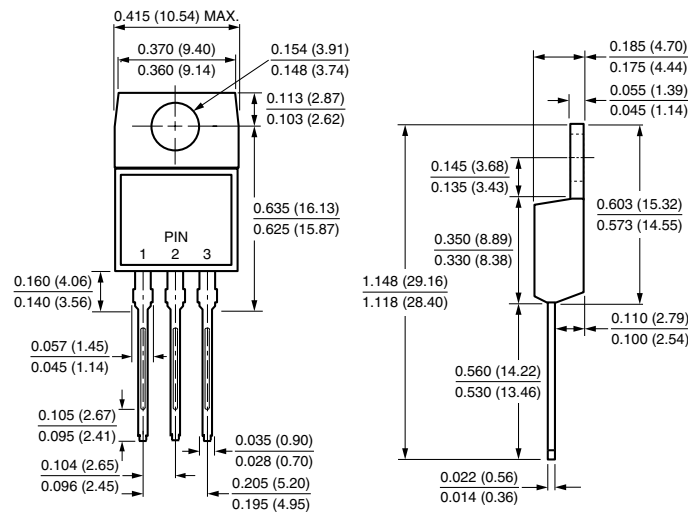


Figure 4. Typical Reverse Leakage Characteristics Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

TO-220AB





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