

## 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](http://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 <sub>F(AV)</sub>	16 A
V <sub>RRM</sub>	50 V, 100 V, 150 V, 200 V
I <sub>FSM</sub>	125 A
t <sub>rr</sub>	35 ns
V <sub>F</sub> at I <sub>F</sub>	0.895 V
T <sub>J</sub> max.	150 °C
Package	TO-220AB
Diode variation	Common cathode

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

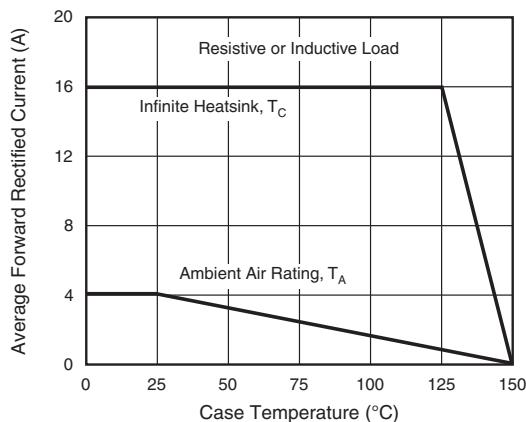
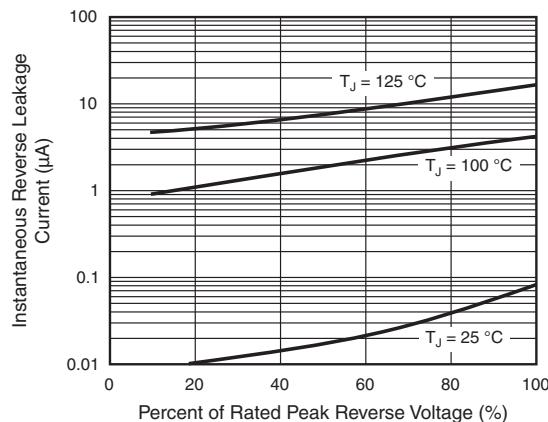
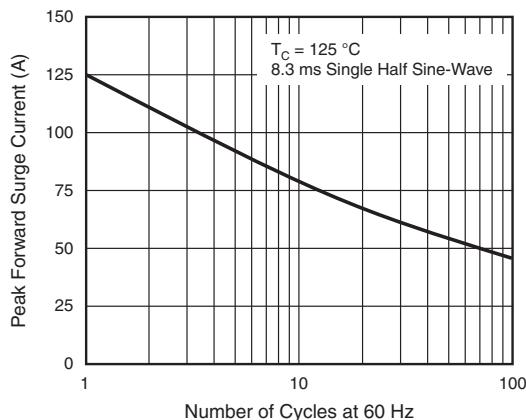
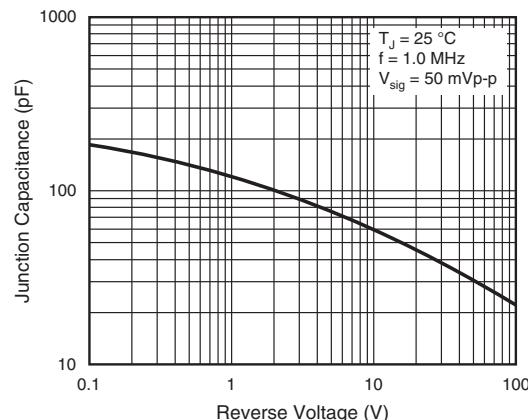
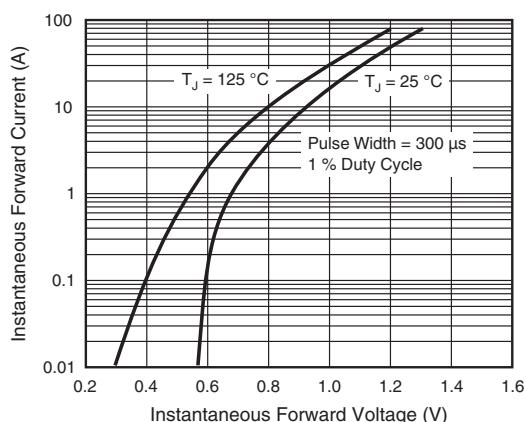
<b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)										
PARAMETER	TEST CONDITIONS		SYMBOL	GI2401	GI2402	GI2403	GI2404	UNIT		
Max. instantaneous forward voltage per diode	$I_F = 4\text{ A}$	$T_J = 25^\circ\text{C}$	$V_F$	0.900			V			
	$I_F = 8\text{ A}$	$T_J = 25^\circ\text{C}$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

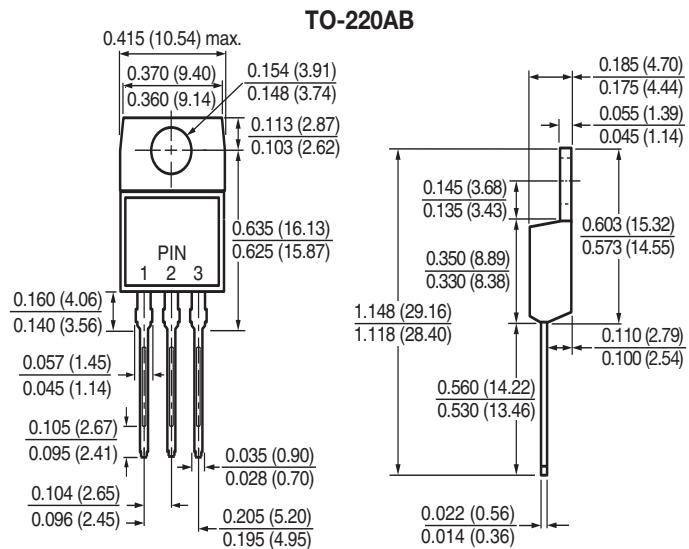
<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)							
PARAMETER	SYMBOL	GI2401	GI2402	GI2403	GI2404	UNIT	
Typical thermal resistance per diode <sup>(1)</sup>	$R_{\theta JA}$	16			$^\circ\text{C}/\text{W}$		
	$R_{\theta JC}$	2.2					

**Note**

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

<b>ORDERING INFORMATION</b> (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** ( $T_A = 25^\circ\text{C}$  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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