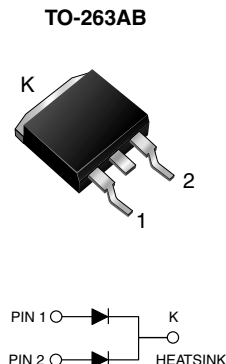


Dual Common-Cathode Ultrafast Plastic Rectifier



FEATURES

- Glass passivated chip junction
- Ultrafast recovery time
- Low switching losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 245 °C
- 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-263AB

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

Mounting Torque: 10 in-lbs maximum

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

PARAMETER	SYMBOL	GIB2401	GIB2402	GIB2403	GIB2404	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 $T_C = 125 \text{ °C}$	$I_{F(AV)}$	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	GIB2401	GIB2402	GIB2403	GIB2404	UNIT
Maximum instantaneous forward voltage per diode	I _F = 4 A I _F = 8 A I _F = 4 A I _F = 8 A	T _J = 25 °C T _J = 25 °C T _J = 100 °C T _J = 100 °C	V _F	0.900 0.975 0.800 0.895				V
Maximum DC reverse current per diode at rated DC blocking voltage		T _C = 25 °C T _C = 100 °C	I _R	50 150			5.0 500	μA
Maximum reverse recovery time	I _F = 0.5 A, I _R = 1.0 A, I _{rr} = 0.25 A		t _{rr}	35				ns
Typical junction capacitance per diode	4 V, 1 MHz		C _J	85				pF

THERMAL CHARACTERISTICS ($T_C = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)						
PARAMETER	SYMBOL	GIB2401	GIB2402	GIB2403	GIB2404	UNIT
Typical thermal resistance per diode ⁽¹⁾	$R_{\theta JC}$		1.2			$^{\circ}\text{C/W}$

Note:

(1) Thermal resistance 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-263AB	GIB2401-E3/45	1.35	45	50/tube	Tube
TO-263AB	GIB2401-E3/81	1.35	81	900/reel	Tape and reel
TO-263AB	GIB2401HE3/45 ⁽¹⁾	1.35	45	50/tube	Tube
TO-263AB	GIB2401HE3/81 ⁽¹⁾	1.35	81	900/reel	Tape and reel

Note:

(1) Automotive grade AEC Q101 qualified

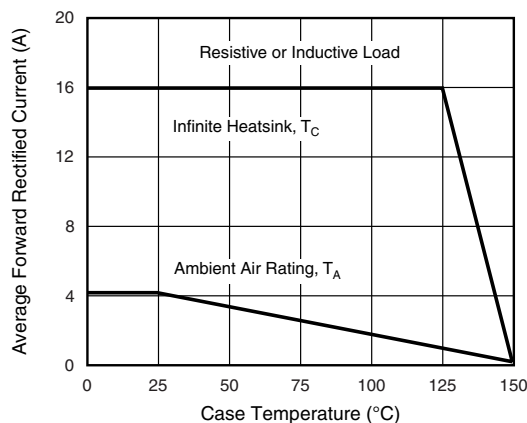
RATINGS AND CHARACTERISTICS CURVES($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Figure 1. Maximum Forward Current Derating Curve

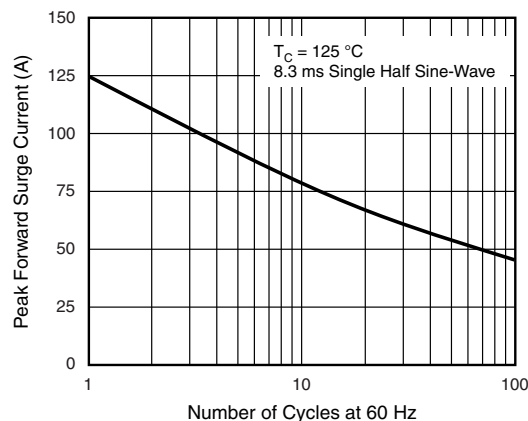


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

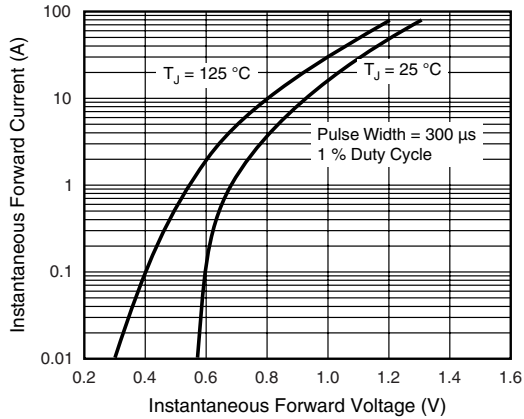


Figure 3. Typical Instantaneous Forward Characteristics Per Diode

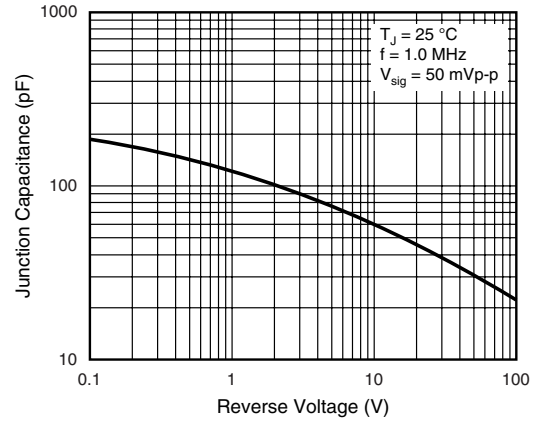


Figure 5. Typical Junction Capacitance Per Diode

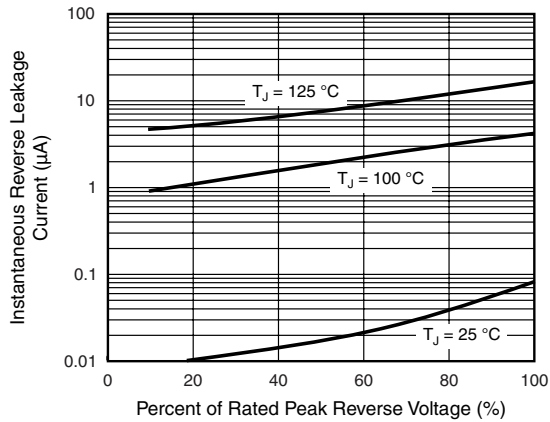
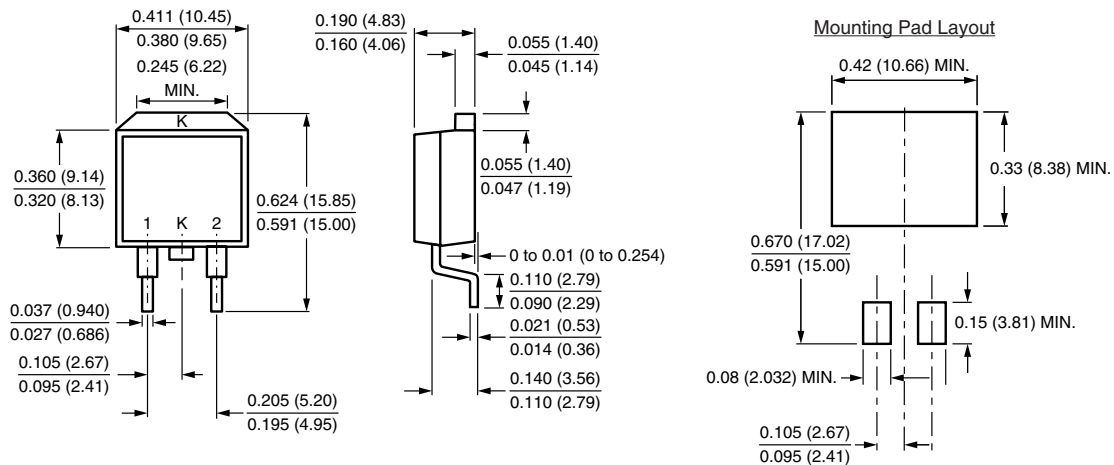


Figure 4. Typical Reverse Leakage Characteristics Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

TO-263AB





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