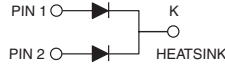
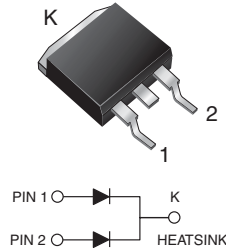


## Dual Common Cathode Ultrafast Plastic Rectifier

**D<sup>2</sup>PAK (TO-263AB)**

**DESIGN SUPPORT TOOLS AVAILABLE**


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
$V_F$	0.895 V
$T_J$ max.	150 °C
Package	D <sup>2</sup> PAK (TO-263AB)
Circuit configurations	Common cathode

**FEATURES**

- Power pack
- 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
- AEC-Q101 qualified available
  - Automotive ordering code: base P/NHE3
- 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:** D<sup>2</sup>PAK (TO-263AB)

Molding compound meets UL 94V-0 flammability rating  
 Base P/N-E3 - RoHS-compliant, commercial grade  
 Base P/NHE3\_X - RoHS-compliant and AEC-Q101 qualified  
 ("\_X" denotes revision code e.g. A, B,...)

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

E3 suffix meets JESD 201 class 1A whisker test, HE3 suffix meets JESD 201 class 2 whisker test

**Polarity:** as marked

**Mounting Torque:** 10 in-lbs max.

MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)						
PARAMETER	SYMBOL	GIB2401	GIB2402	GIB2403	GIB2404	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 $T_C = 125$ °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
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 per diode at rated DC blocking voltage			$I_R$	$T_C = 25$ °C		5.0	µA	
				$T_C = 100$ °C		500		
Max. 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 <sup>(1)</sup>	$R_{\theta JC}$	1.2				$^\circ\text{C/W}$

**Note**

<sup>(1)</sup> 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_A/P <sup>(1)</sup>	1.35	P	50/tube	Tube
TO-263AB	GIB2401HE3_A/I <sup>(1)</sup>	1.35	I	900/reel	Tape and reel

**Note**

<sup>(1)</sup> AEC-Q101 qualified

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

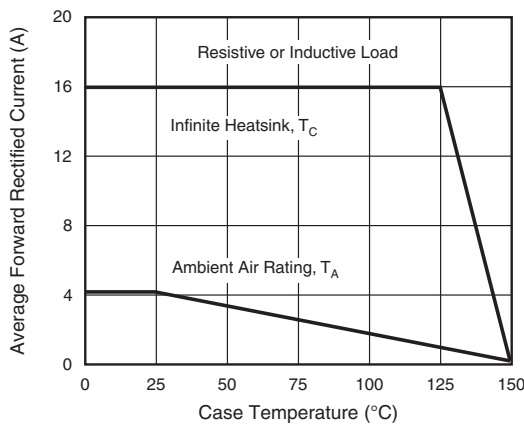


Fig. 1 - Max. Forward Current Derating Curve

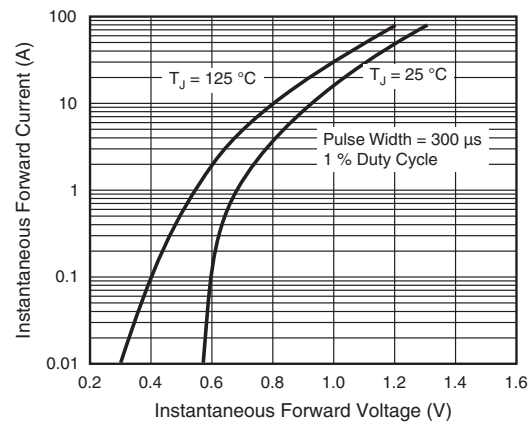


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

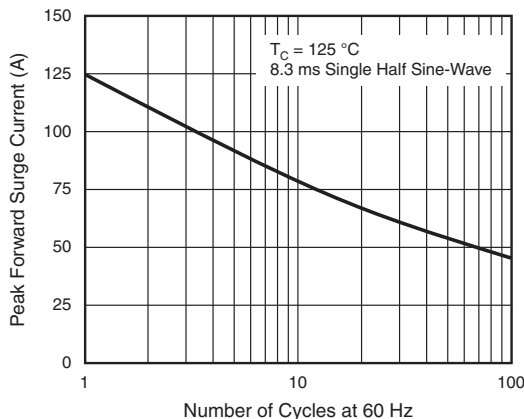


Fig. 2 - Max. Non-Repetitive Peak Forward Surge Current Per Diode

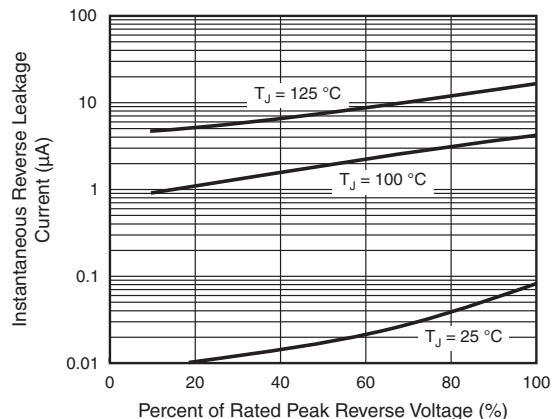


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

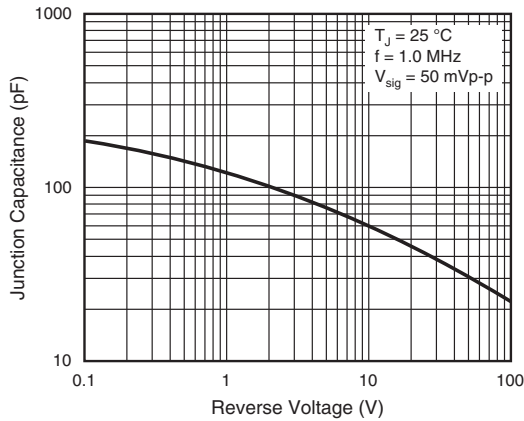
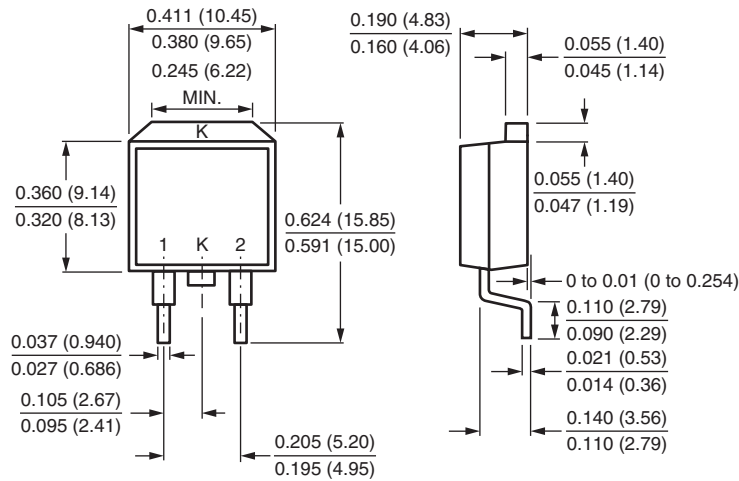


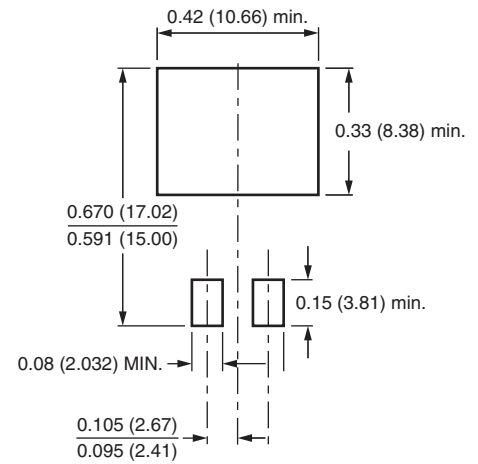
Fig. 5 - Typical Junction Capacitance Per Diode

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

### D<sup>2</sup>PAK (TO-263AB)



### Mounting Pad Layout





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