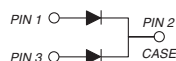
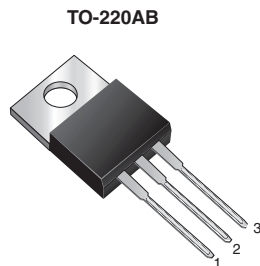


Dual Common Cathode Ultrafast Plastic Rectifier



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


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.

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 |

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

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 _{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 | |



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

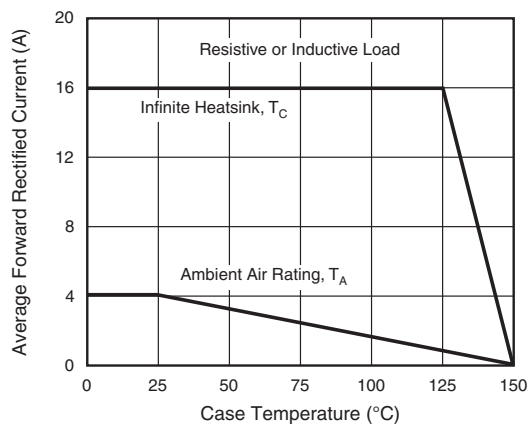


Fig. 1 - Max. Forward Current Derating Curve

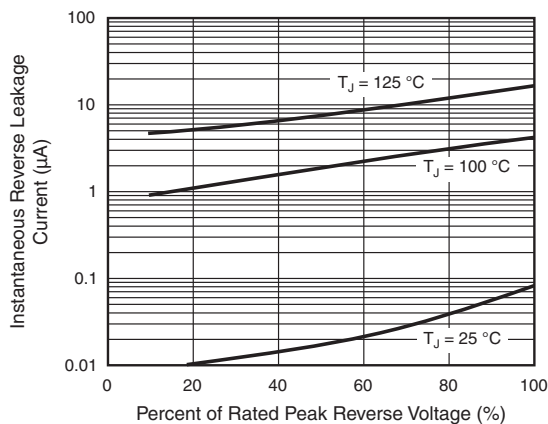


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

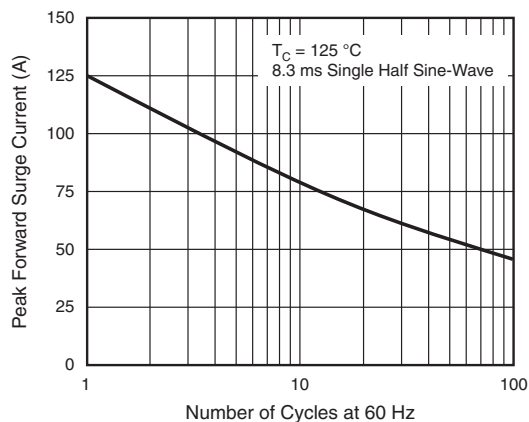


Fig. 2 - Max. Non-Repetitive Peak Forward Surge Current Per Diode

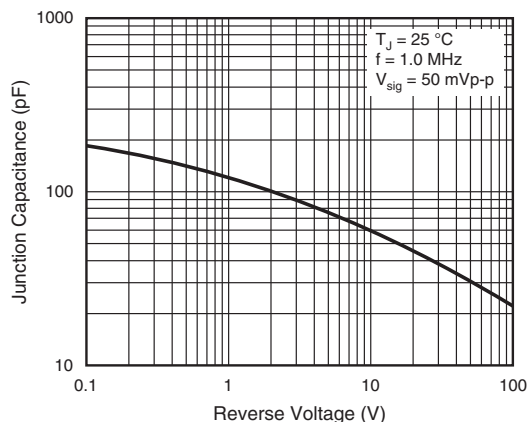


Fig. 5 - Typical Junction Capacitance Per Diode

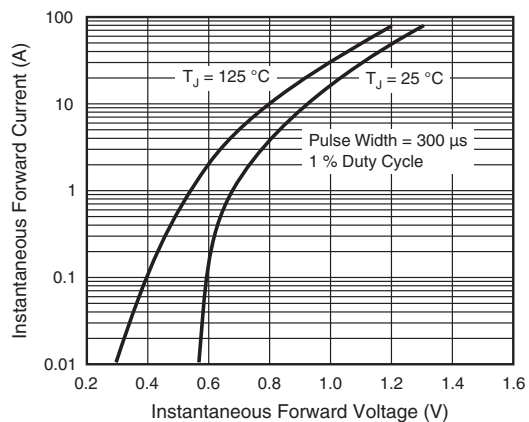
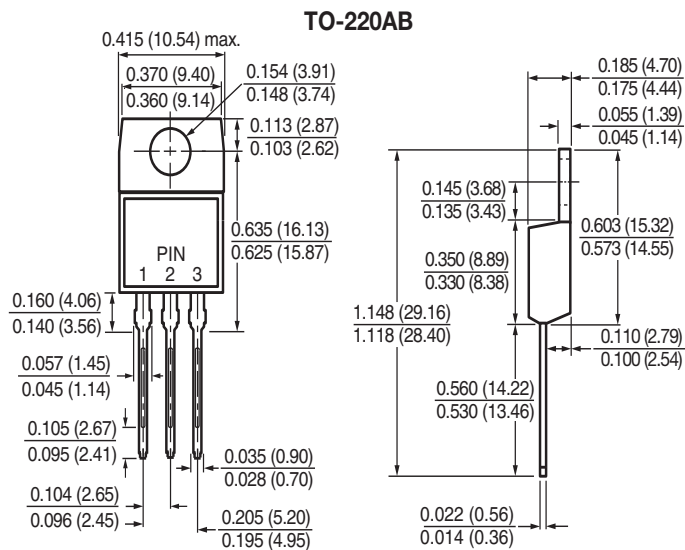


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode



PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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