

TO-220AC

Ultrafast Plastic Rectifier

Reverse Voltage 50 to 200V
Forward Current 8.0A

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junction
- Low power loss
- Low leakage current
- High surge capability
- Superfast recovery time for high efficiency
- High temperature soldering guaranteed: 250°C, 0.16" (4.06mm) from case for 10 seconds

Mechanical Data

Case: JEDEC TO-220AC molded plastic body over passivated chips

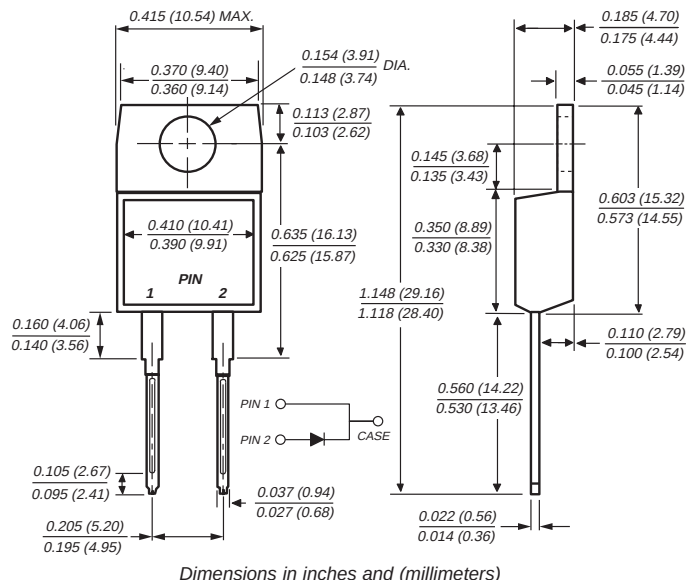
Terminals: Lead solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any

Mounting Torque: 10 in-lbs max.

Weight: 0.064 oz., 1.81 g



Maximum Ratings and Thermal Characteristics (T_C = 25°C unless otherwise noted)

Parameter	Symbol	GI1401	GI1402	GI1403	GI1404	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°C	I _{F(AV)}	8.0				A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	125				A
Typical thermal resistance (Note 1)	R _{θJA}	15				°C/W
(Note 2)	R _{θJC}	2.2				
Operating and storage temperature range	T _J , T _{STG}	-65 to +150				°C

Electrical Characteristics (T_C = 25°C unless otherwise noted)

Parameter	Symbol	GI1401	GI1402	GI1403	GI1404	Unit
Maximum instantaneous forward voltage at I _F = 4A, T _J = 25°C I _F = 8A, T _J = 25°C I _F = 4A, T _J = 100°C I _F = 8A, T _J = 100°C	V _F	0.900 0.975 0.800 0.895				V
Maximum DC reverse current at rated DC blocking voltage at T _C = 25°C T _C = 100°C	I _R	5.0 150				μA
Maximum reverse recovery time at I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A	t _{rr}	35				ns
Typical junction capacitance at 4V, 1MHz	C _J	85				pF

Notes: (1) Thermal resistance from junction to ambient in free air, no heatsink
(2) Thermal resistance from junction to case and ambient mounted on heatsink

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Maximum Forward Current Derating Curve

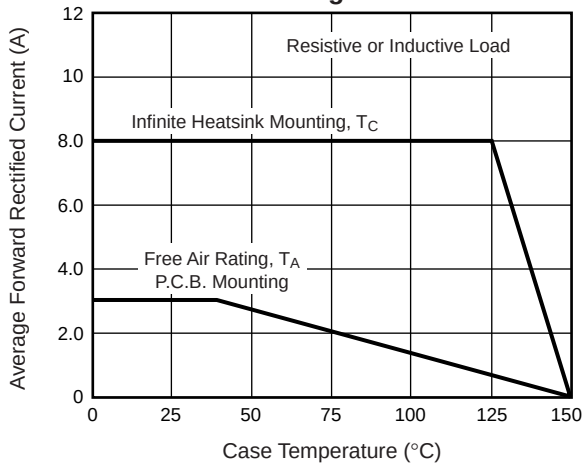


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

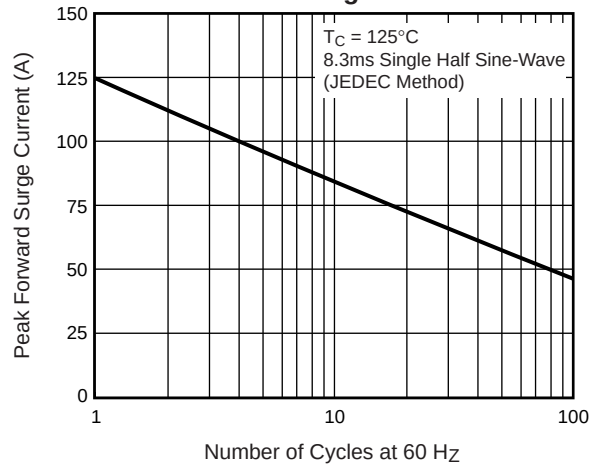


Fig. 3 – Typical Instantaneous Forward Characteristics

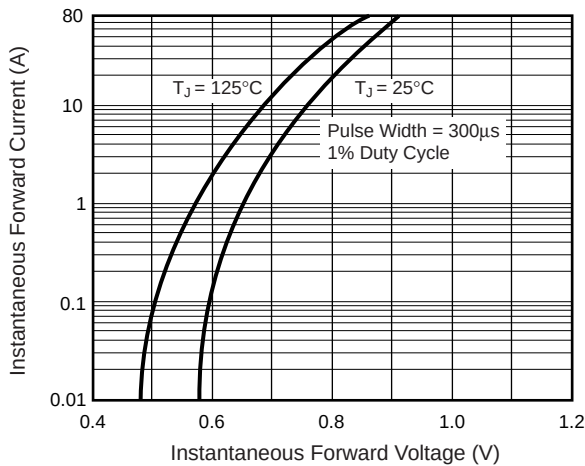


Fig. 4 – Typical Reverse Leakage Characteristics

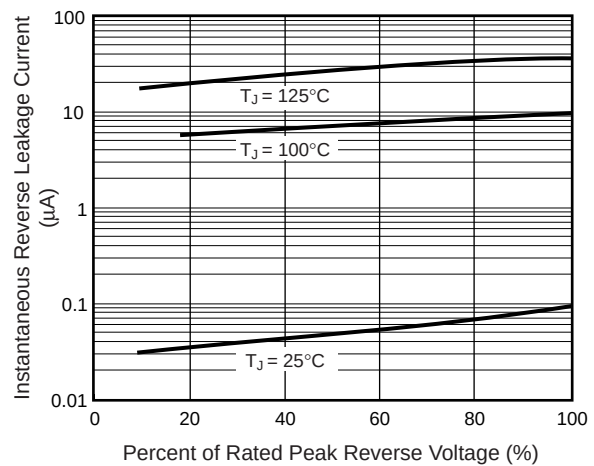


Fig. 5 – Typical Junction Capacitance

