

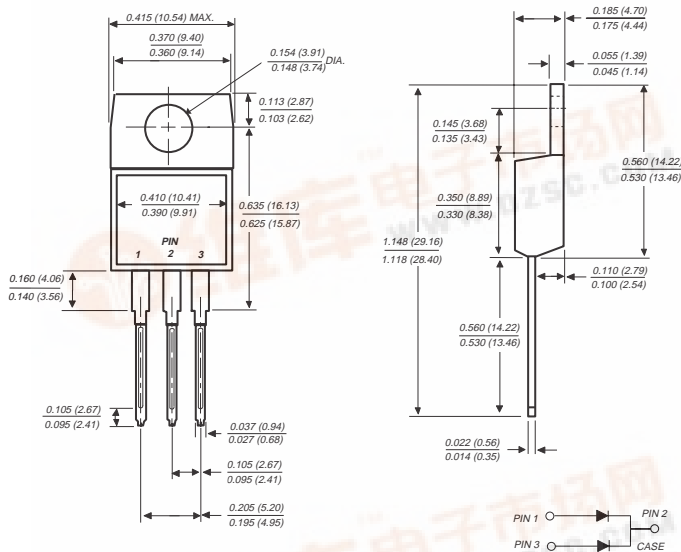
UG10ACT THRU UG10DCT

ULTRAFAST SOFT RECOVERY RECTIFIER

Reverse Voltage - 200 Volts

Forward Current - 10.0 Amperes

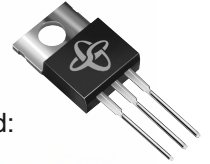
TO-220AB



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ Ideally suited for free wheeling diode power factor correction applications
- ◆ Soft recovery characteristics
- ◆ Excellent high temperature switching
- ◆ Optimized to reduce switching losses
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals
- ◆ Glass passivated chip junction



MECHANICAL DATA

Case: JEDEC TO-220AB molded plastic body

Terminals: Plated leads, solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any

Mounting Torque: 5 in. - lbs. max.

Weight: 0.08 ounce, 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	UG10ACT	UG10BCT	UG10CCT	UG10DCT	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	Volts
Working peak reverse voltage	V_{RWM}	50	100	150	200	Volts
Maximum RMS voltage	V_{RMS}	35	70	105	140	Volts
Maximum DC blocking voltage	V_{DC}	50	100	150	200	Volts
Maximum average forward rectified current at $T_C=100^\circ\text{C}$	$I_{(AV)}$	10				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg	I_{FSM}	60				Amps
Maximum instantaneous forward voltage per leg at $I_F=10\text{A}$, $T_J=25^\circ\text{C}$ $I_F=5\text{A}$, $T_J=25^\circ\text{C}$ $I_F=5\text{A}$, $T_J=150^\circ\text{C}$	V_F	1.25 1.10 0.895				Volts
Maximum reverse leakage current per leg at working peak reverse voltage	I_R	10 200				μA
Maximum reverse recovery time per leg at $I_F=1.0\text{A}$, $di/dt=100\text{A}/\mu\text{s}$, $V_R=30\text{V}$, $I_{rr}=0.1 I_{RM}$	t_{rr}	25				ns
Maximum reverse recovery time per leg at $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$	Maximum Typical	25 15				ns
Maximum reverse recovery current per leg at $I_F=5\text{A}$, $di/dt=50\text{A}/\mu\text{s}$, $V_R=30\text{V}$	I_{RM}	0.7				Amps
Maximum stored charge per leg $I_F=2\text{A}$, $di/dt=20\text{A}/\mu\text{s}$, $V_R=30\text{V}$, $I_{rr}=0.1 I_{RM}$	Maximum Typical	5.5 4.5				nC
Typical thermal resistance from junction to case per leg	$R_{\theta JC}$	4.5				$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-40 to +150				$^\circ\text{C}$

RATINGS AND CHARACTERISTIC CURVES UG10ACT THRU UG10DCT

FIG. 1 - FORWARD CURRENT DERATING CURVE

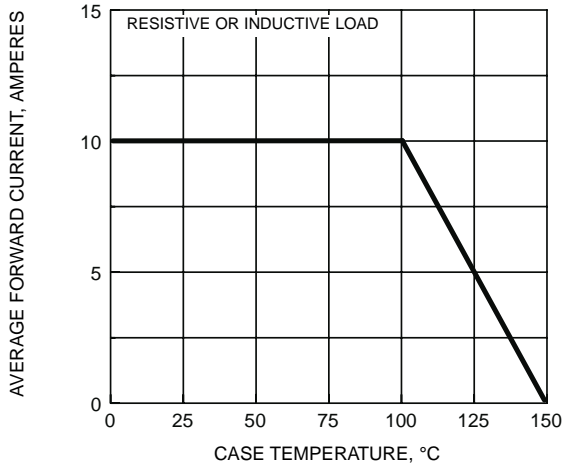


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

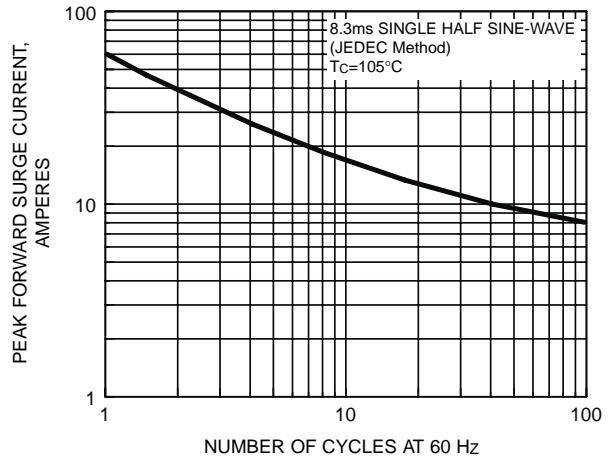


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

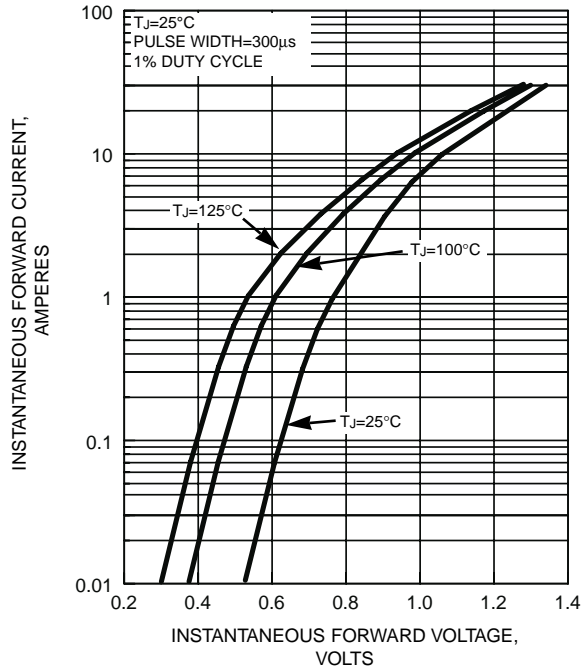


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

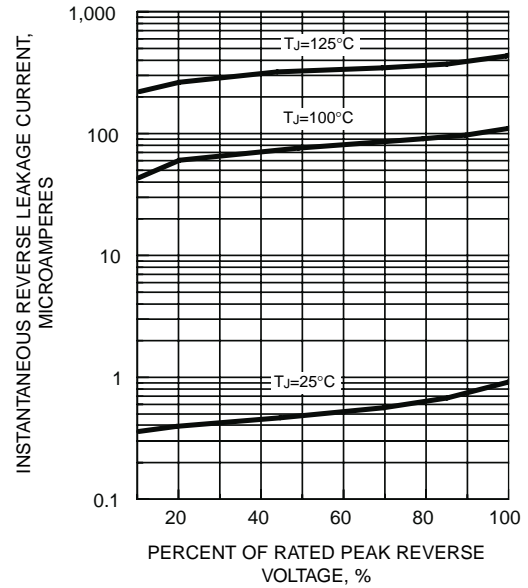


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS PER LEG

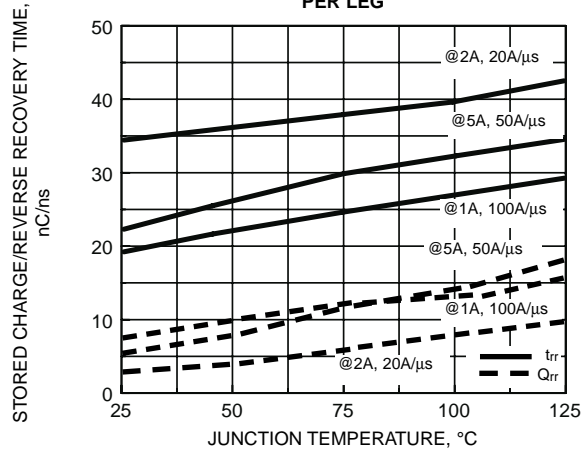


FIG. 6 - TYPICAL JUNCTION CAPACITANCE PER LEG

