

UGB10FCT AND UGB10GCT

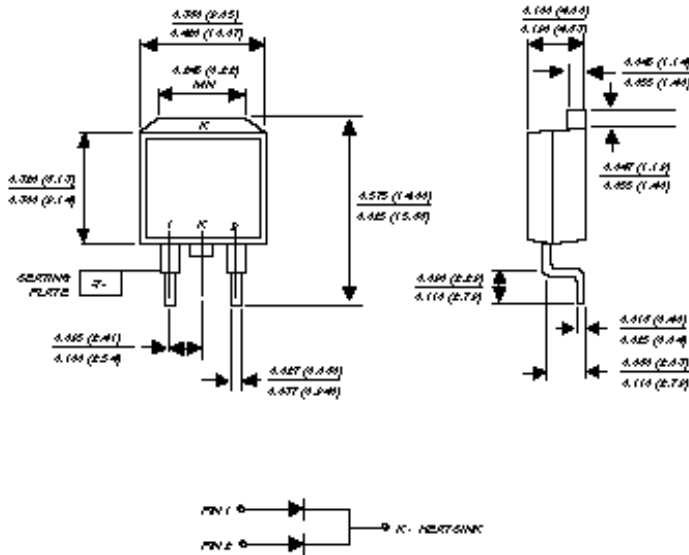
ULTRAFAST SOFT RECOVERY RECTIFIER

Reverse Voltage - 300-400 Volts Forward Current - 10.0 Amperes

TO-263AB

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 in accordance with CECC 802 / Reflow guaranteed
- ◆ Glass passivated chip junction



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: JEDEC TO-263AB 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 | UGB10FCT | UGB10GCT | UNITS |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------|----------|-------|
| Maximum repetitive peak reverse voltage | VRRM | 300 | 400 | Volts |
| Working peak reverse voltage | VRWM | 225 | 300 | Volts |
| Maximum RMS voltage | VRMS | 210 | 280 | Volts |
| Maximum DC blocking voltage | VDC | 300 | 400 | Volts |
| Maximum average forward rectified current at T _C =100°C | I(AV) | 10 | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg | IFSM | 60A | | Amps |
| Maximum instantaneous forward voltage per leg I _F = 5A | T _J =25°C T _J =150°C V _F | 1.30 1.05 | | Volts |
| Maximum reverse leakage current at working peak reverse voltage | T _J =25°C T _J =100°C I _R | 10 200 | | μA |
| Maximum Reverse recovery time per leg at I _F =1.0A, di/dt=100A/μs, V _R =30V, I _{rr} =0.1 I _{RM} | t _{rr} | 50 | | ns |
| Maximum reverse recovery time per leg at I _F =0.5A, I _R =1.0A, I _{rr} =0.25A | t _{rr} | 35 | | ns |
| Maximum reverse recovery current per leg at I _F =5A, di/dt=50A/μs, V _R =30V | T _C =100°C I _{RM} | 3.0 | | Amps |
| Maximum stored charge per leg I _F =2A, di/dt=20A/μs, V _R =30V, I _{rr} =0.1 I _{RM} | Q _{rr} | 50 | | nC |
| Typical thermal resistance from junction to case per leg | R _{θJC} | 4.5 | | °C/W |
| Operating junction and storage temperature range | T _J , T _{STG} | -40 to +150 | | °C |

NOTE: (1) Pulse test: 300μs pulse width, 1% duty cycle

NOTICE: Advanced product information is subject to change without notice

RATINGS AND CHARACTERISTIC CURVES UGB10FCT AND UGB10GCT

FIG. 1 - FORWARD CURRENT DERATING CURVE

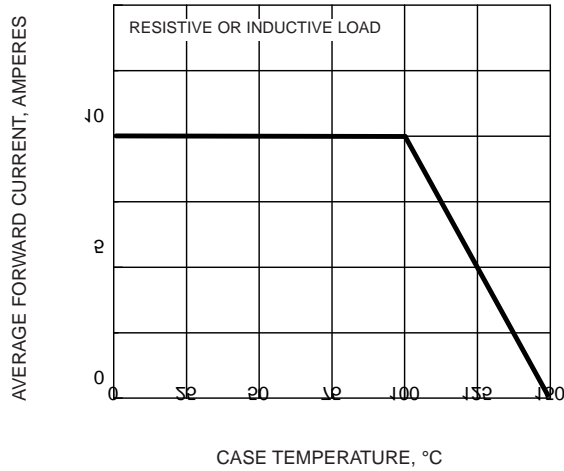


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

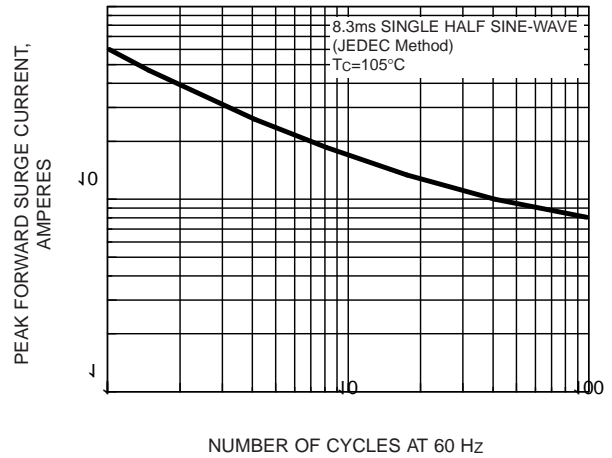


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

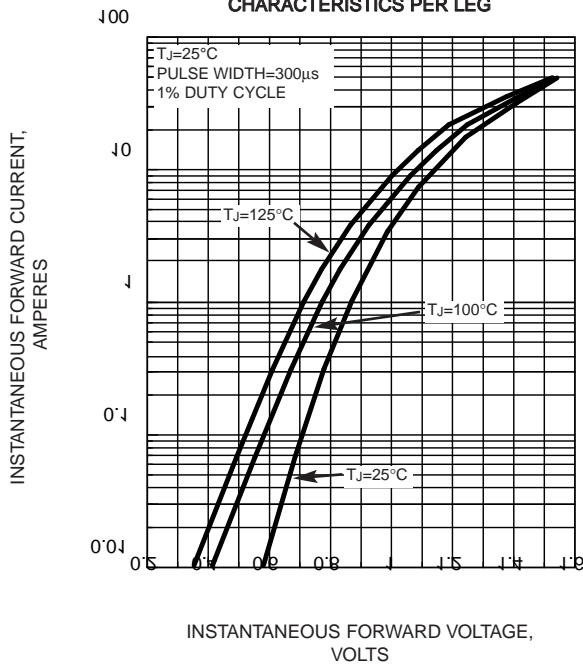


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

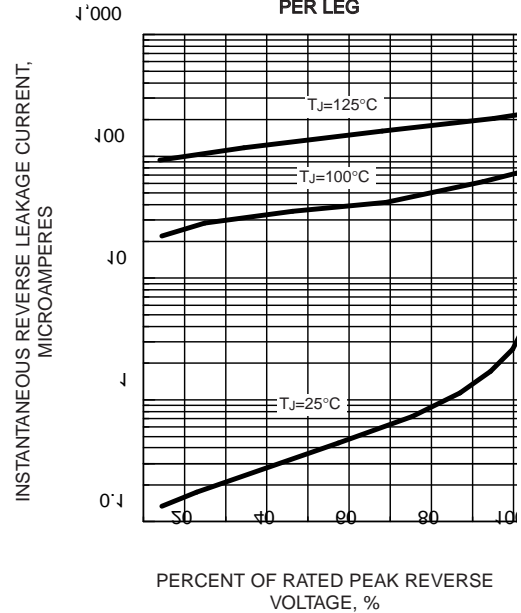


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS PER LEG

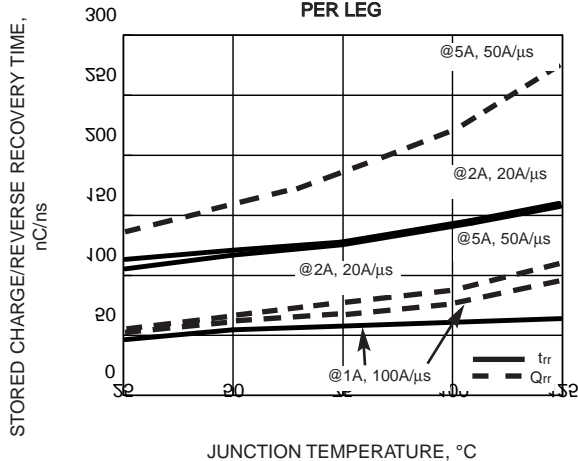


FIG. 6 - TYPICAL JUNCTION CAPACITANCE PER LEG

