

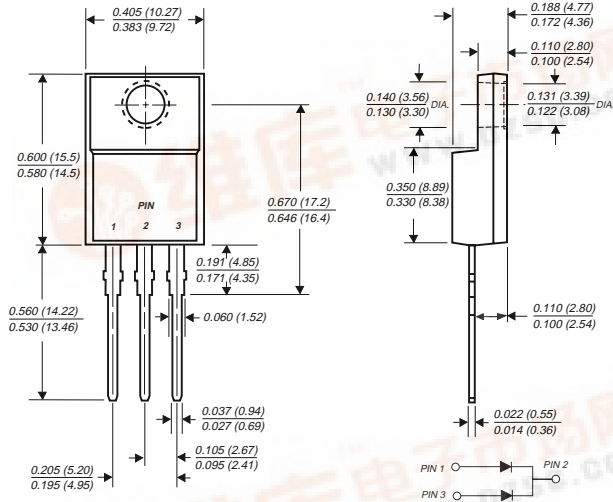
UGF18ACT THRU UGF18DCT

ULTRAFAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 200 Volts

Forward Current - 18.0 Amperes

ITO-220AB



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ Ideally suited for use in very high frequency switching power supplies, inverters and as a free wheeling diode
- ◆ Ultrafast 25 nanosecond reverse recovery times
- ◆ Soft recovery characteristics
- ◆ Excellent high temperature switching
- ◆ Glass passivated junctions
- ◆ High temperature soldering guaranteed: 250°C, 0.25" (6.35mm) from case for 10 seconds



MECHANICAL DATA

Case: JEDEC ITO-220AB molded plastic body

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

Polarity: As marked

Mounting Position: Any

Weight: 0.08 ounce, 2.24 grams

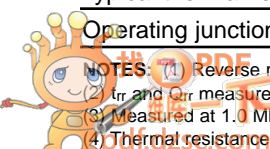
Mounting Torque: 5 in. - lbs. max.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| | SYMBOLS | UGF18ACT | UGF18BCT | UGF18CCT | UGF18DCT | UNITS |
|---|-----------------------------------|----------------------|----------|----------|----------|-------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 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 =105°C | I(AV) | 18.0 | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg at T _C =105°C | I _{FSM} | 175.0 | | | | Amps |
| Maximum instantaneous forward voltage per leg at 9.0A 20A 5.0A, T _J =100°C | V _F | 1.10 1.20 0.95 | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage per leg T _A =25°C T _A =100°C | I _R | 10.0 300.0 | | | | µA |
| Maximum reverse recovery time (NOTE 1) | t _{rr} | 20.0 | | | | ns |
| Maximum reverse recovery time (NOTE 2) T _J =25°C T _J =100°C | t _{rr} | 30.0 50.0 | | | | ns |
| Maximum recovered stored charge (NOTE 2) T _J =25°C T _J =100°C | Q _{rr} | 20.0 45.0 | | | | nC |
| Typical junction capacitance (NOTE 3) | C _J | 30.0 | | | | pF |
| Typical thermal resistance (NOTE 4) | R _{θJC} | 4.0 | | | | °C/W |
| Operating junction and storage temperature range | T _J , T _{STG} | -65 to +150 | | | | °C |

NOTES: (1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
 (2) t_{rr} and Q_{rr} measured at: I_F=9.0A, V_R=30V, di/dt=50A/µs, I_{rr}=10% I_{RM}
 (3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
 (4) Thermal resistance from junction to case per leg



RATINGS AND CHARACTERISTIC CURVES UGF18ACT THRU UGF18DCT

FIG. 1 - FORWARD CURRENT DERATING CURVE

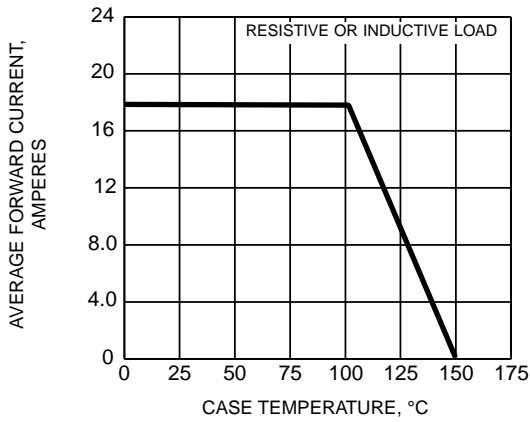


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

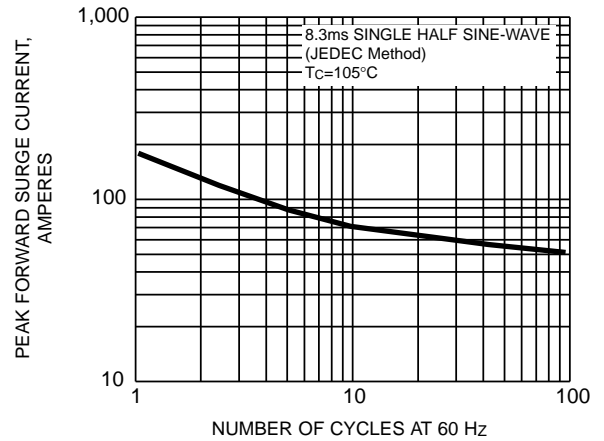


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

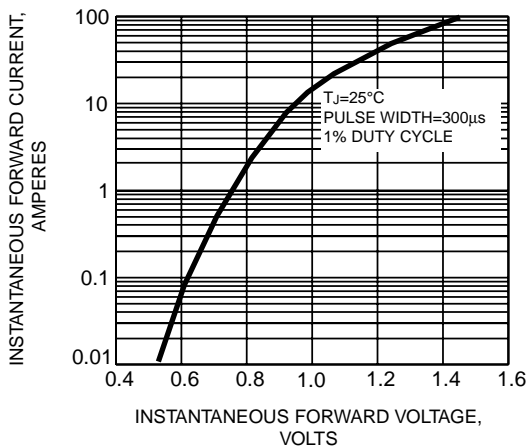


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

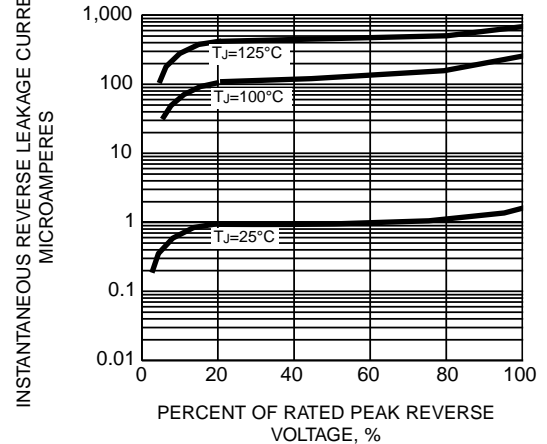


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS PER LEG

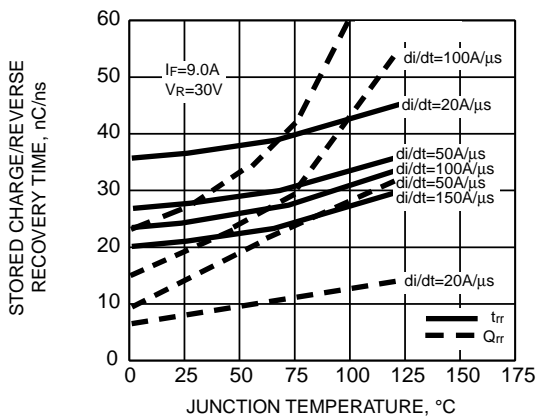


FIG. 6 - TYPICAL JUNCTION CAPACITANCE PER LEG

