SEMICONDUCTOR

DATA SHEET

UF1600FCT THRU UF1608FCT

ISOLATION ULTRA FAST RECOVERY RECTIFIERS

VOLTAGE- 50 to 800 Volts CURRENT - 16.0 Amperes

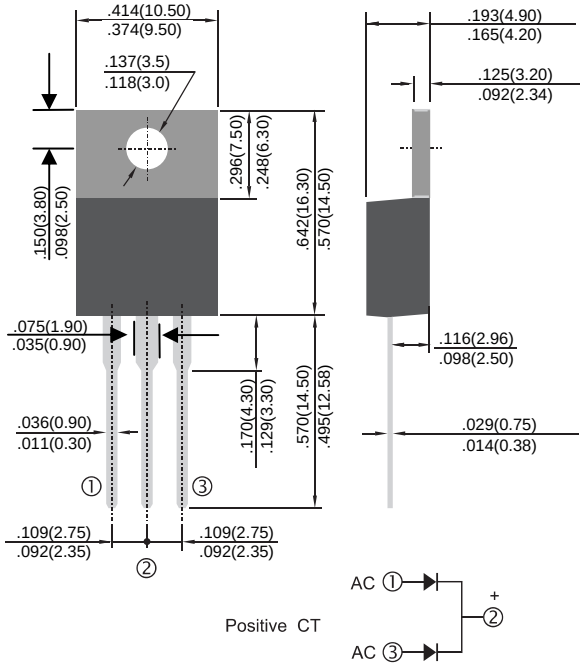
FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 utilizing Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- Low power loss, high efficiency.
- Low forwrd voltge, high current capability
- High surge capacity.
- Ultra fast recovery times, high voltage.
- High temperature soldering : 260 °C/ 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

MECHANCALDATA

- Case: ITO-220AB full molded plastic package
- Terminals: Lead solderable per MIL-STD-202, Method 208
- Polarity: As marked.
- Standard packaging: Any

ITO-220AB Unit:inch(mm)



Ordering Information	
Part Number	**Remark**
UF160xFCT-F	General
UF160xFCT-H	Halogen Free
UF160xFCT-A	AEC-Q101 qualified

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

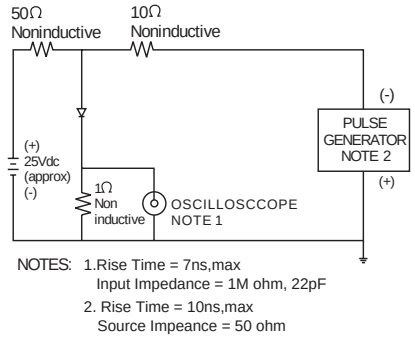
RETEMARAP	SYMBOL	UF 1600FCT	UF 1601FCT	UF 1602FCT	UF 1603FCT	UF 1604FCT	UF 1606FCT	UF 1608FCT	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	300	400	600	800	V
Maximum RMS Voltage	VRMS	35	70	140	210	280	420	560	V
Maximum DC Blocking Voltage	VDC	50	100	200	300	400	600	800	V
Maximum Average Forward Current .375"(9.5mm)	IAV	16							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	IFSM	125							A
Maximum Forward Voltage at 8.0A	VF	1.0			1.30		1.70		V
Maximum DC Reverse current T_A=25°C at Rated DC Blocking Voltage T_A=125°C	IR	10 500							μA
Typical Junction Capacitance (Note 1)	CJ	170					130		pF
Maximum Reverse Recovery Time (Note 2)	TRR	50					75		ns
Typical Thermal Resistance (Note 3)	RθJC	2							°C/W
Operating Junction and Storage Temperature Range	TJ,TSTG	-55 to +150							°C

NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions: I_F=.5A, I_R=1A, Irr=.25A.
3. Thermal resistance from Junction to case and from junction to lead 0.375" (9.5mm) P.C.B mounted.

RATING AND CHARACTERIS TIC CURVES

UF1600FCT THRU UF1608FCT



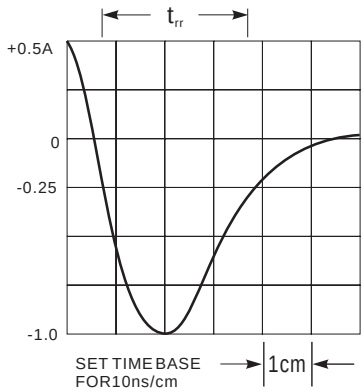


Fig.1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

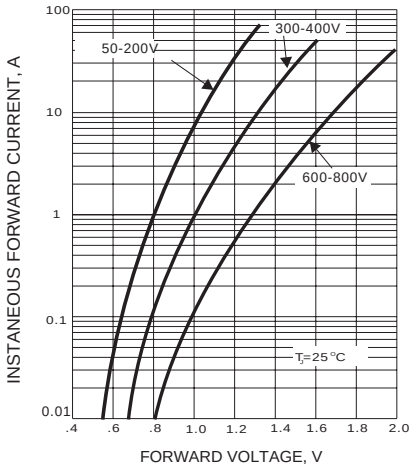


Fig. 2- FORWARD CHARACTERISTICS

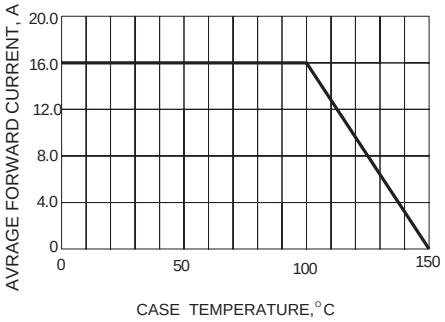


Fig.3-FORWARD CURRENT DERATING CURVE

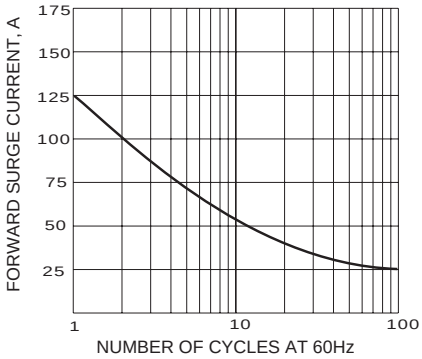


Fig.4-PEAK FORWARD SURGE CURRENT

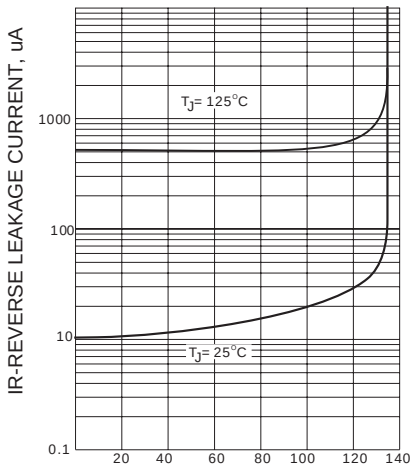


Fig.5-TYPICAL REVRSE CHARACTERISTICS

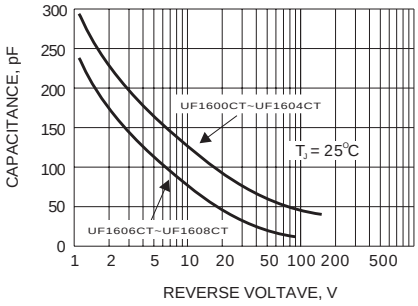


Fig.6-TYPICAL JUNCTION CAPACITANCE