



# DATA SHEET

SEMICONDUCTOR

## UF1600CT~UF1608CT

### ISOLATION ULTRAFAST RECOVERY RECTIFIERS

50 to 800 Volts 16 Amperes CURRENT



#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- Low power loss, high efficiency.
- Low forward voltage, 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

#### MECHANICAL DATA

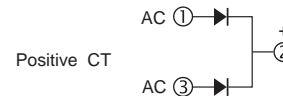
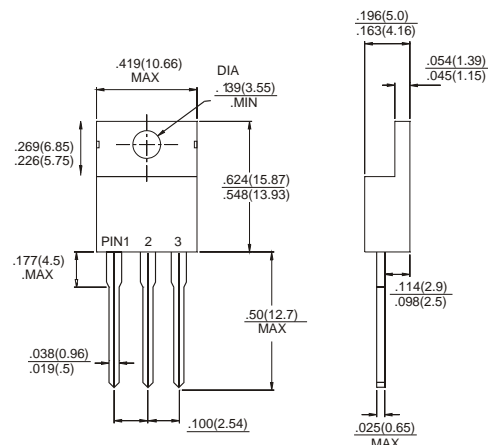
- Case: ITO-220AB full molded plastic package
- Terminals: Lead solderable per MIL-STD-202, Method 208
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.08 ounces, 2.26grams.

#### 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%

TO-220AB Unit:inch(mm)



RETEMARAP	SYMBOL	UF 1600CT	UF 1601CT	UF 1602CT	UF 1603CT	UF 1604CT	UF 1606CT	UF 1608CT	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)	I <sub>AV</sub>	16							A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I <sub>FSM</sub>	125							A
Maximum Forward Voltage at 8.0A	V <sub>F</sub>	1.0		1.30		1.70		V	
Maximum DC Reverse current T <sub>A</sub> =25 at Rated DC Blocking Voltage T <sub>A</sub> =125	I <sub>R</sub>	10 500							μA
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	170				130		pF	
Maximum Reverse Recovery Time (Note 2)	T <sub>RR</sub>	50				75		ns	
Typical Thermal Resistance (Note 3)	R <sub>JC</sub>	2							°C/W
Operating Junction and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-55 to +150							°C

#### NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions: I<sub>F</sub>=.5A, I<sub>R</sub>=1A, I<sub>rr</sub>=.25A.
3. Thermal resistance from Junction to ambient and from junction to lead 0.375" (9.5mm) P.C.B mounted.

# RATING AND CHARACTERISTIC CURVES

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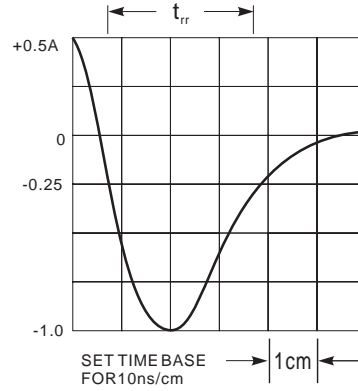
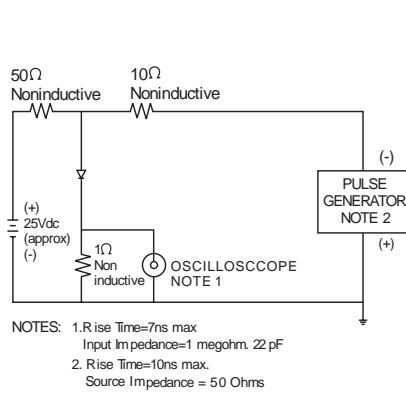


Fig.1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

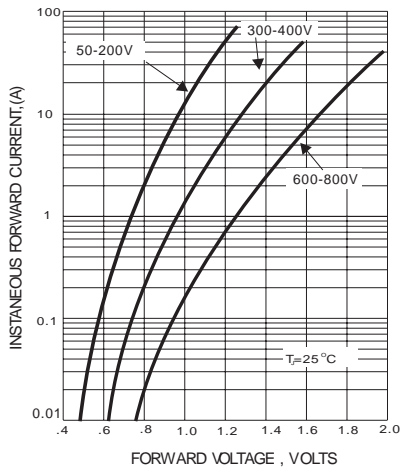


Fig.2- FORWARD CHARACTERISTICS

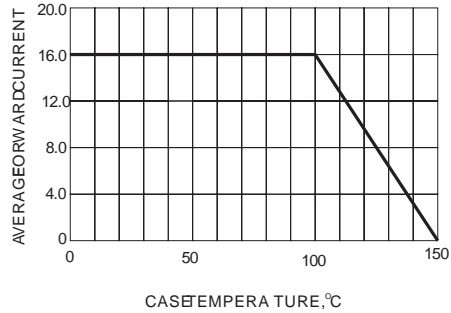


Fig.3-FORWARD CURRENT DERATING CURVE

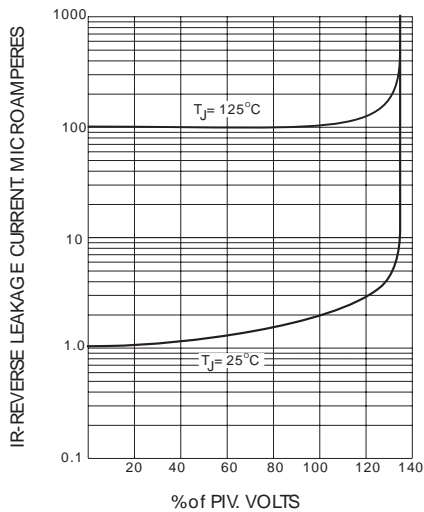


Fig.5- TYPICAL REVERSE CHARACTERISTICS

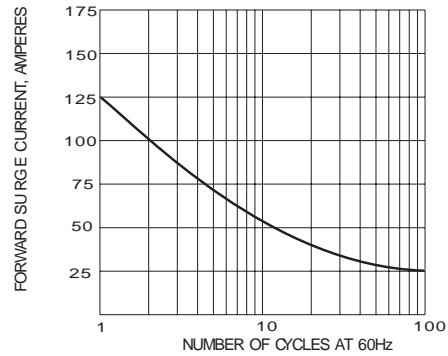


Fig.4-PEAK FORWARD SURGE CURRENT

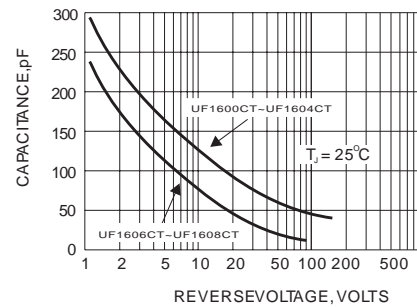


Fig.6-TYPICAL JUNCTION CAPACITANCE