



UF1001 THRU UF1006

VOLTAGE RANGE 150 to 600 Volts
CURRENT 10.0 Ampere

Features

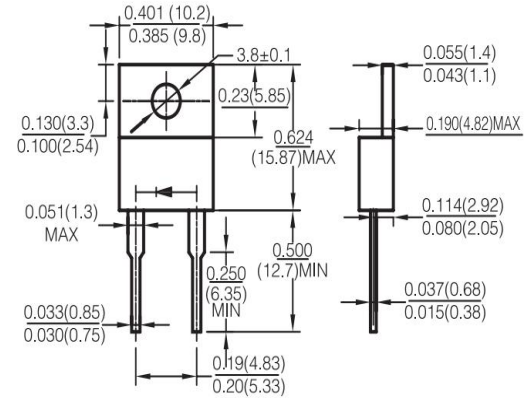
- Low power loss, high efficiency, High surge capacit
- For use in low voltage, high frequency inverters
- Metal silicon junction, majority carrier conduction
- High current Capability, low forward voltage drop
- Guard ring for over voltage protection

TO-220AC



Mechanical Data

- Case: ITO-220AC molded plastic over glass passivated chip
- Case: Copper ase plate & Plastic Shell
- Molding compound meets UL 94 V-0 flammability rating, Halogen-free, RoHS-compliant, and commercial grade
- Weight: 0.08ounce, 2.24 gram



Maximum Ratings and Electrical Characteristics

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

TYPE NUMBER	SYMBOL	UF 1001	UF 1002	UF 1003	UF 1004	UF 1006	UNIT
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	150	200	300	400	600	Volts
Maximum RMS Voltage	V _{RMS}	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V _{DC}	100	200	300	400	600	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm) lead length at T _A =100°C	I _(AV)	10					Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I _{FSM}	160					Amps
Maximum Instantaneous Forward Voltage at 10A	V _F	1.00		1.25		1.75	Volts
Maximum DC Reverse Current at rated DC blocking Voltage at	T _A = 25°C	5.0					µA
	T _A = 100°C	50					
Maximum Reverse Recovery Time (NOTE 1)	T _{RR}	35		50			nS
Typical Junction Capacitance (NOTE 2)	C _J	62					pF
Typical Thermal Resistance (NOTE 3)	R _{θJA}	1.4					°C/W
Operating Junction Temperature Range	T _J	-55 to +150					°C
Storage Temperature Range	T _{STG}	-55 to +150					°C

Notes:

1. Reverse Recovery Test Conditions: I_f=0.5A, I_r=1.0A, I_{rr}=0.25A.
2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
3. Unit mounted on P.C.B. with 0.033"×0.043"(1.00mm×1.30mm) copper pads.



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Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

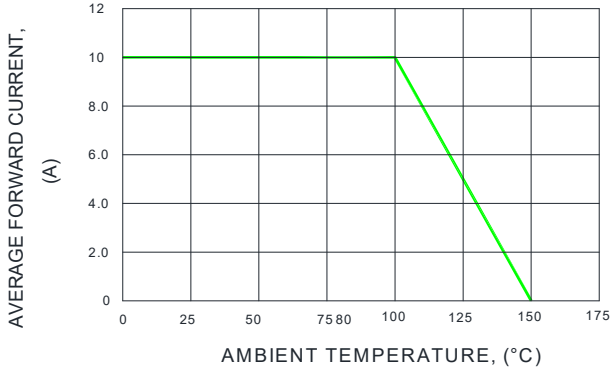


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

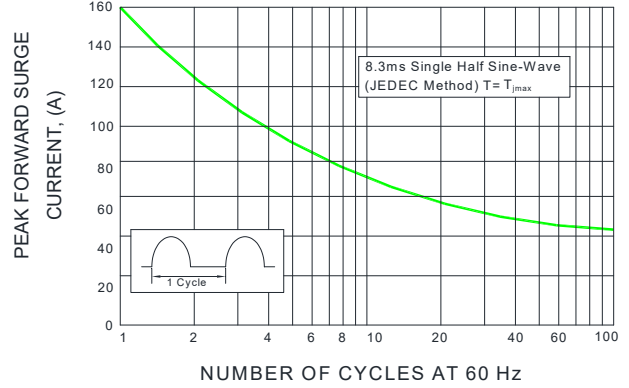


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

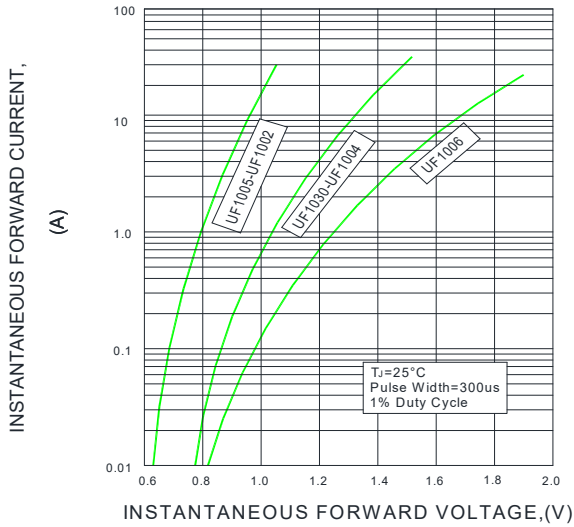


FIG.4-TYPICAL REVERSE CHARACTERISTICS

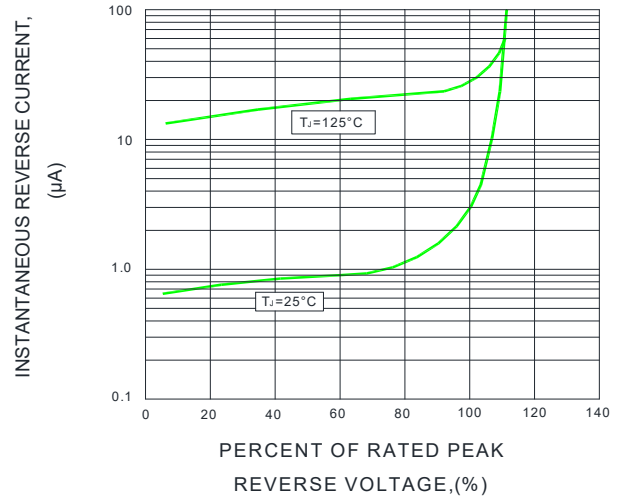


FIG.5-TYPICAL JUNCTION CAPACITANCE

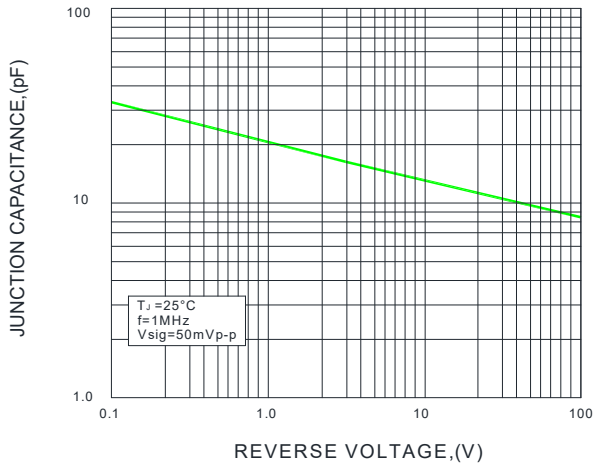
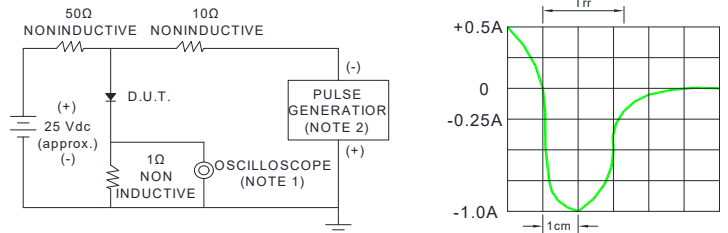


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES : 1. Rise Time=7ns max. Input Impedance= 1 magohm. 22pF
2. Rise time=10ns max. Source Impedance= 50 ohms

SET TIME BASE FOR 50/100ns/cm



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