FRONTIER
ELECTRONICS CO., LTD.

UF300-005 THRU UF300-06

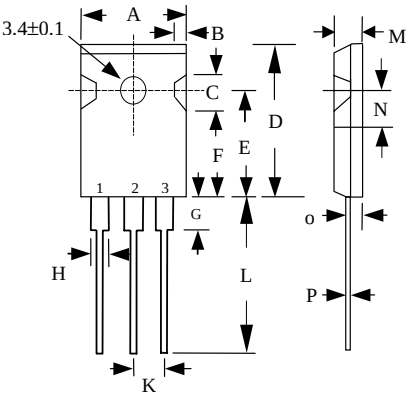
30A ULTRA FAST RECOVERY RECTIFIER

FEATURES

- DUAL RECTIIER CONSTRUCTION, POSITIVE CENTERTAP
- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY FLAMMABILITY CLASSIFICATION 94V-0
- GLASS PASSIVATED CHIP JUNCTIONS
- SUPERFAST RECOVERY TIMES, HIGH VOLTAGE
- LOW FORWARD VOLTAGE, HIGH CURRENT CAPABILITY
- LOW THERMAL RESISTANCE
- LOW POWER LOSS, HIGH EFFICIENCY
- HIGH TEMPERATURE SOLDERING GUARANTEED：260℃,0.17″ (4.3mm) FROM CASE FOR 10 SECONDS

MECHANICAL DATA

- CASE：JEDEC TO-3P MOLDED PLASTIC
- TERMINALS：PLATED LEAD SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY：AS MARKED
- MOUNTING POSITION：ANY
- WEIGHT：6.4 GRAMS



	MILLIMETERS	
	MIN	MAX
A	-	16.2
B	1.7	2.7
C	5.0	6.0
D	-	22.0
E	14.8	15.2
F	11.7	12.7
G	-	4.5
H	-	2.5
I	-	3.5
J	1.1	1.4
K	5.25	5.65
L	19.0	-
M	4.7	5.3
N	2.8	3.2
O	2.4	2.8
P	0.45	0.85

CASE：TO-3P
DIMENSIONS IN INCHES AND (MILLIMETERS)

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%

RATINGS	SYMBOL	UF300 -005	UF300 -01	UF300 -015	UF300 -02	UF300 -03	UF300 -04	UF300 -05	UF300 -06	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	50	100	150	200	300	400	500	600	V
MAXIMUM RMS VOLTAGE	V_{RMS}	35	70	105	140	210	280	350	420	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	50	100	150	200	300	400	500	600	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT SEE FIG.1	I_O	30.0								A
PEAK FORWARDSURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	300								A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_J	175								PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta jC}$	2.0								℃/W
STORAGE TEMPERATURE RANGE	T_{STG}	- 55 TO + 150								℃
OPERATING TEMPERATURE RANGE	T_{OP}	- 55 TO + 150								℃

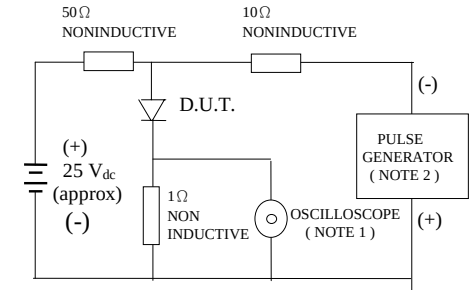
ELECTRICAL CHARACTERISTICS (A_T T_A =25℃ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	UF300 -005	UF300 -01	UF300 -015	UF300 -02	UF300 -03	UF300 -04	UF300 -05	UF300 -06	UNITS
MAXIMUM FORWARD VOLTAGE AT 15A PER LEG	V_F	0.95				1.30				V
MAXIMUM DC REVERSE CURRENT AT TA=25°C	I_R	10								μA
MAXIMUM DC REVERSE CURRENT AT TA=100°C	I_R	100								μA
MAXIMUM REVERSE RECOVERY TIME (NOTE 3)	T_{RR}	35				50				nS

NOTES： 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE 0F 4.0 VOLTS
2. THERMAL RESISTANCE JUNCTION TO CASE PER LEG MOUNTED ON HEATSINK
3. REVERSE RECOVERY TEST CONDITIONS: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

RATINGS AND CHARACTERISTIC CURVE UF300-005 THRU UF300-06

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



NOTE: 1. RISETIME=7ns MAX. INPUT IMPEDANCE=1 MEGOHM 22PF
2. RISE TIME =10 ns MAX. SOURCE IMPEDENCE=50 OHMS

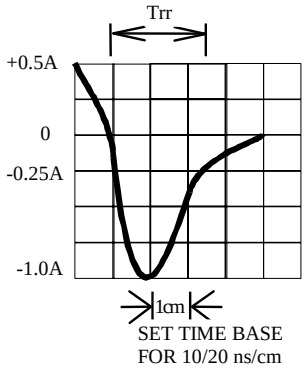


FIG. 2 -TYPICAL FORWARD CURRENT DERATING CURVE

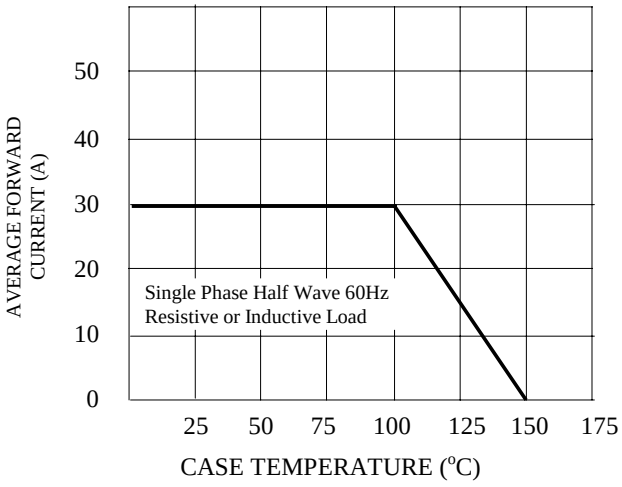


FIG. 3 -TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

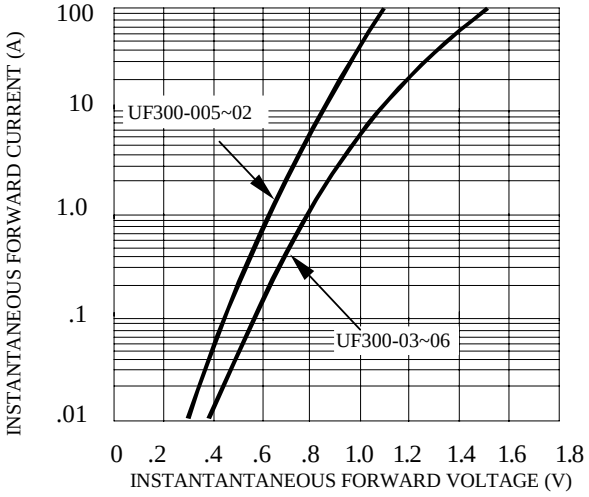


FIG. 4 -TYPICAL REVERSE CHARACTERISTICS

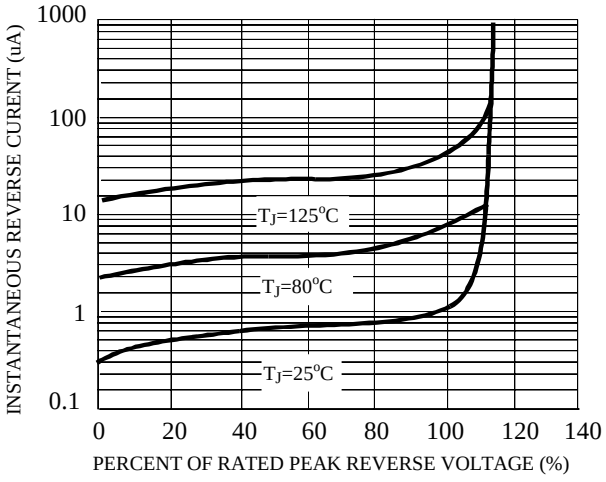


FIG. 5 -TYPICAL JUNCTION CAPACITANCE