



# Frontier Electronics Corp.

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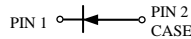
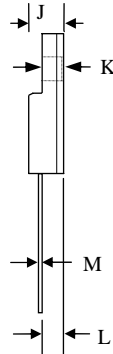
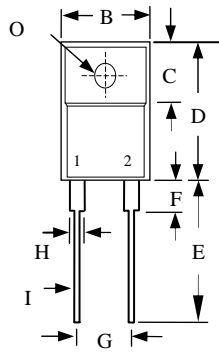
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## DAMPER DIODE FAST, HIGH VOLTAGE

**5TUZ47C**

CASE : ITO-220AC ( 5TUZ47C ), FULLY INSULATED PACKAGE



	MILLIMETERS	
	MIN	MAX
B	9.72	10.27
C	6.30	6.90
D	14.50	15.50
E	13.00	13.80
F	-	4.1
G	4.95	5.20
H	-	1.52
I	-	0.9
J	-	4.8
K	-	3.1
L	2.5	2.9
M	-	0.8
O	-	Ø 3.4

### FEATURES

- ULTRA FAST RECOVERY TIME
- LOW FORWARD VOLTAGE
- LOW THERMAL RESISTANCE
- HIGH CURRENT CAPABILITY
- HIGH VOLTAGE
- GLASS PASSIVATED CHIP JUNCTION

### MECHANICAL DATA

- CASE: TRANSFER MOLDED
- TERMINAL: PLATED LEADS, MIL-STD-202F METHOD 2026
- POLARITY: AS MARKED
- EPOXY: UL94V-0 FLAME RETARDANT MOLDING COMPOUND
- MOUNTING POSITION: ANY
- WEIGHT 1.81 GRAMS

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	5TUZ47C	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	$V_{RRM}$	1500	V
MAXIMUM RMS VOLTAGE	$V_{RMS}$	1050	V
MAXIMUM DC BLOCKING VOLTAGE	$V_{DC}$	1500	V
PEAK WORKING FORWARD CURRENT @ TC 105°C	$I_o$	5	A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	$I_{FSM}$	50	A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	$C_j$	100	PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta jc}$	4.0	°C/W
STORAGE TEMPERATURE RANGE	$T_{STG}$	- 55 TO + 150	°C
OPERATING TEMPERATURE RANGE	$T_{OP}$	- 55 TO + 150	°C

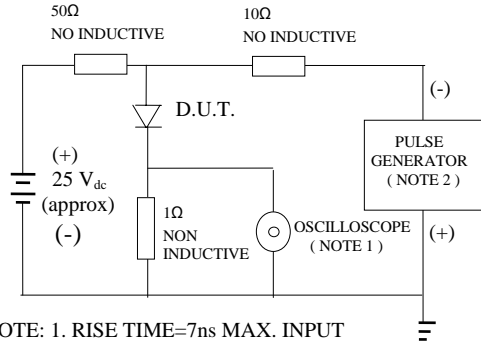
### ELECTRICAL CHARACTERISTICS (A<sub>T</sub> T<sub>A</sub> =25°C UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	5TUZ47C	UNITS
MAXIMUM FORWARD VOLTAGE AT $I_o$ DC	$V_F$	1.8	V
MAXIMUM DC REVERSE CURRENT AT T <sub>A</sub> =25°C	$I_R$	50	μA
MAXIMUM REVERSE RECOVERY TIME (NOTE 3)	$T_{RR}$	250	nS

- NOTES:
1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS
  2. THERMAL RESISTANCE JUNCTION TO CASE PER LEG MOUNTED ON HEAT SINK
  3. REVERSE RECOVERY TEST CONDITIONS:  $I_f=0.5A$ ,  $I_r=1.0A$ ,  $I_{RR}=0.25A$

# RATINGS AND CHARACTERISTIC CURVE 5TUZ47C

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



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

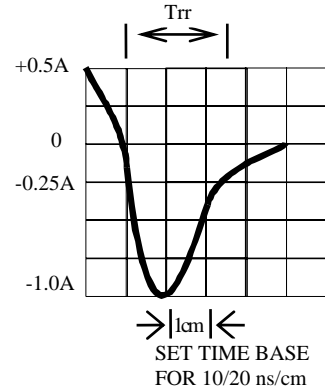


FIG. 2 -TYPICAL FORWARD CURRENT DERATING CURVE

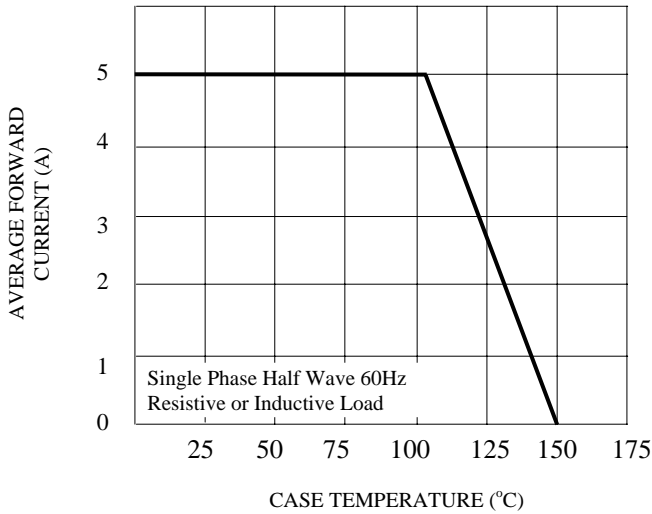


FIG.3 -TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

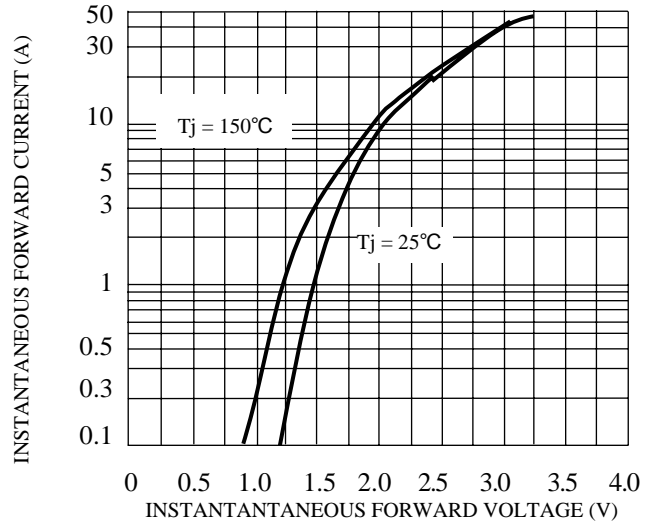


FIG. 4 -TYPICAL JUNCTION CAPACITANCE

