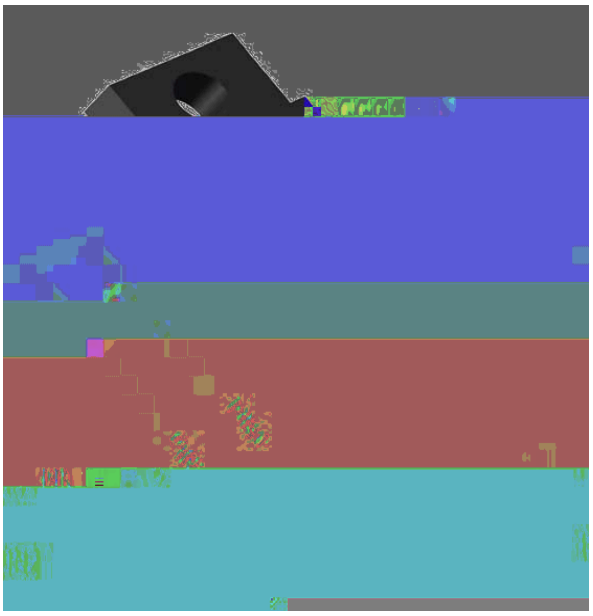
Ultra-Fast Recovery Diodes 10A FRED



Features

- Adopt FRED chip
- Low forward Voltage drop
- Fast reverse recovery time
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

- **Package**: ITO-220AC
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity**: As marked

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Repetitive Peak Reverse Voltage	V_{RRM}	V	200
Average Rectified Output Current @60Hz sine wave, R-load, Tc(FIG.1)	I_O	A	10
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Tj=25	I_{FSM}	A	120
Current Squared Time @1ms≤t≤8.3ms Tj=25	I^2t	A^2s	60
Storage Temperature	T_{stg}		-55 ~ +175
Junction Temperature	Tj		-55 ~ +175
Typical Junction capacitance @4V,1MHz	Cj	pF	150
Mounting torque @recommend torque 5kg cm	Tor	kg cm	8

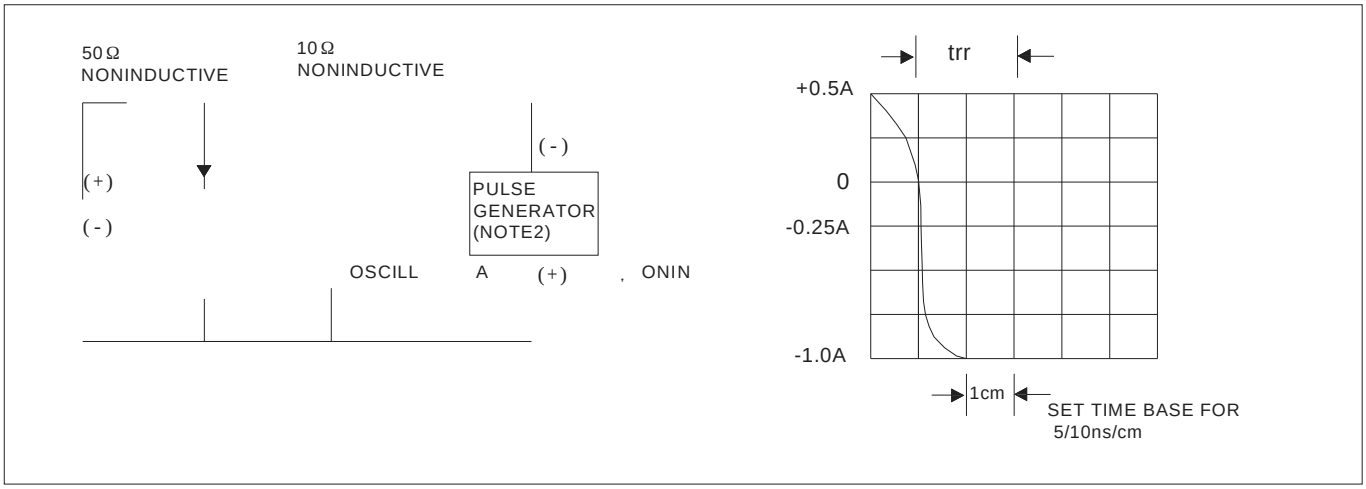
■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	I_{FM}=10.0A @Tj=25	-	0.90	1.0
			I_{FM}=10.0A @Tj=150		0.78	0.9
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	V_{RM}=V_{RRM} Tj=25	-	-	5
	I_{RRM2}		V_{RM}=V_{RRM} Tj=150	-	30	50
Reverse Recovery Time	T_{RR}	ns	I_F=0.5A I_{RM}=1A I_{RR}=0.25A Tj=25	-	25	35
			Tj=25		30	-
			Tj=125	-	47	-

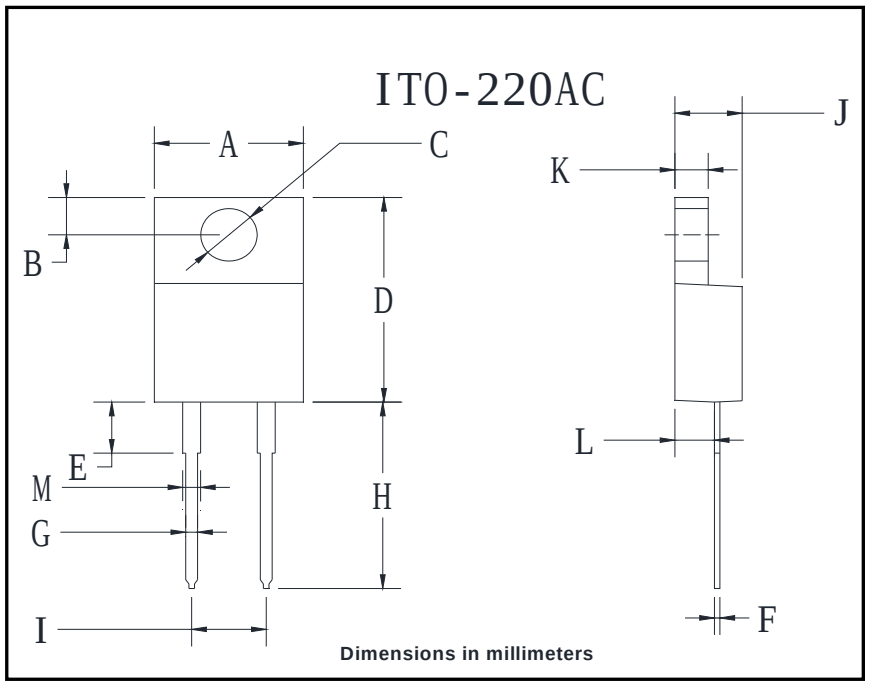
I_F=10A
di/dt=-200A/us
V_{RM}=100V

■**Characteristics** (Typical)

FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■Outline Dimensions



ITO-220AC		
Dim	Min	Max
A	9.8	10.2
B	2.25	2.75
C	2.95	3.45
D	14.75	15.25
E	3.5	4.1
F	0.45	0.75
G	0.45	0.75
H	13.35	14.15
I	4.97	5.23
J	4.3	4.8
K	2.5	2.74
L	2.58	2.82
M	1.03	1.43