



DONGGUAN NANJING ELECTRONICS LTD.,

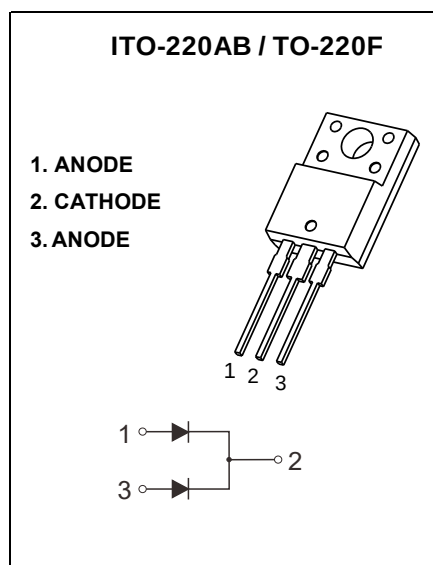
TO-220F/ITO-220AB Plastic-Encapsulate Diode

MURF4020CT- MURF4060CT

SUPER FAST RECOVER RECTIFIER

Features

- $I_{F(AV)}$ 40A
- V_{RRM} 200V-600V
- Ultrafast 35ns Recovery Times
- High Voltage Capability to 600V
- Low Reverse Leakage Current



Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	MURF40 XX CT		
				20	40	60
Repetitive Peak Reverse Voltage	V_{RRM}	V		200	400	600
Maximum RMS Voltage	V_{RMS}	V		140	280	420
Maximum DC Blocking Voltage	V_{DC}	V		200	400	600
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_L=50^\circ\text{C}$	40.0		
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	400		
Operation Junction and Storage Temperature Range	T_J, T_{STG}	$^\circ\text{C}$		-55 ~ +175		

Electrical Characteristics (T=25°C Unless otherwise specified)

Item	Symbol	Unit	Test Condition		MURF40 XX CT		
					20	40	60
Maximum Peak Forward Voltage	V _{FM}	V	I _{FM} =20 A		0.975	1.30	1.60
Maximum Peak Reverse Current	I _{RRM2}	μA	V _{RM} =V _{RRM}	T _J =25℃	5	10	
	T _J =125℃			500			
Reverse Recovery time	t _{rr}	ns	I _F =0.5A,I _R =1.0A,I _{rr} =0.25A		35		
Thermal Resistance(Typical)	R _{θJ-A}	℃/W	Between junction and ambient		2.5		

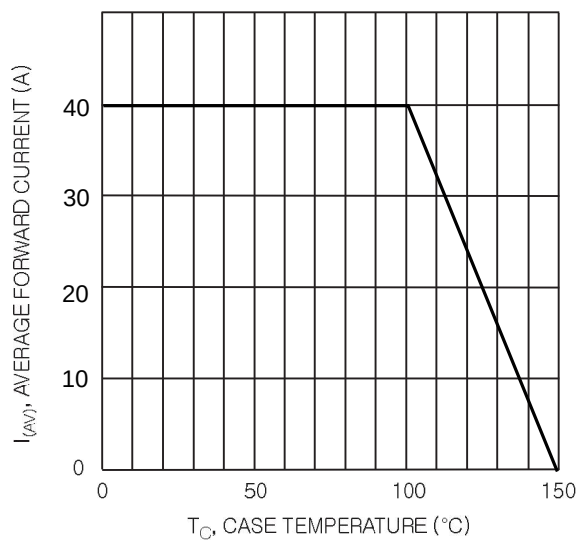


Fig. 1 Forward Current Derating Curve

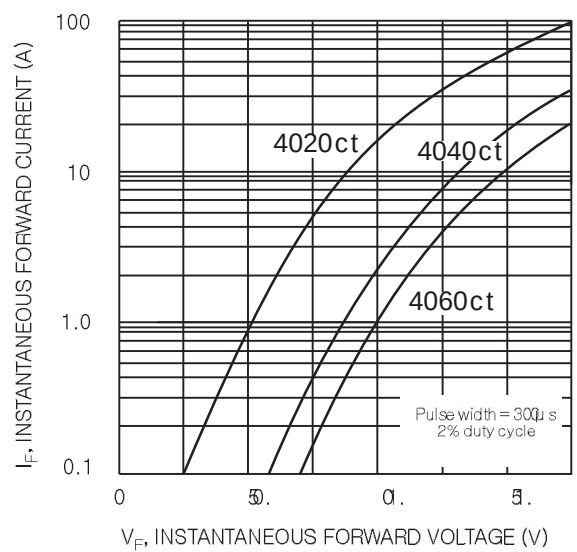


Fig. 2 Typical Forward Characteristics

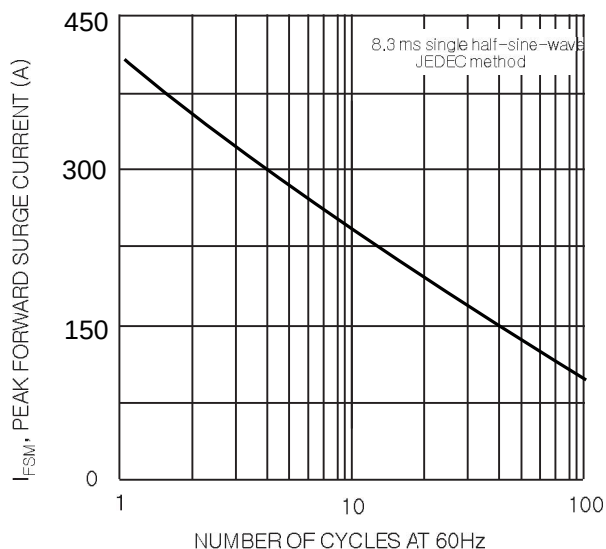


Fig. 3 Maximum Non-Repetitive Surge Current

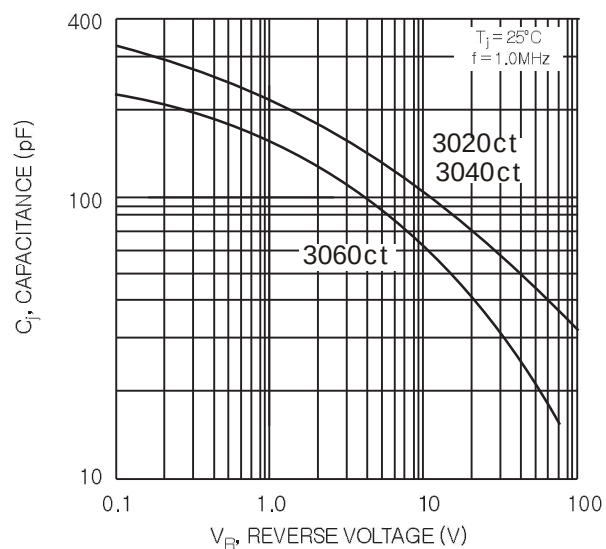
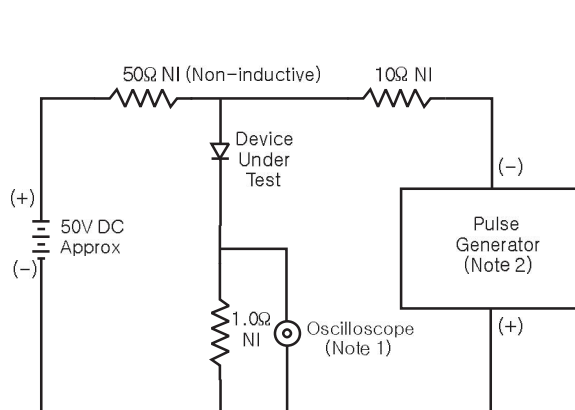


Fig. 4 Typical Junction Capacitance



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0M Ω , 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50 Ω .

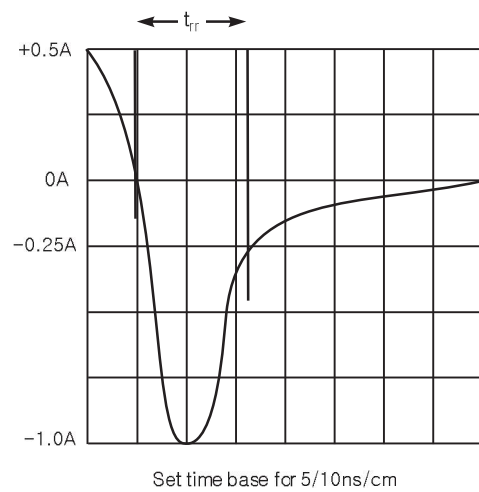
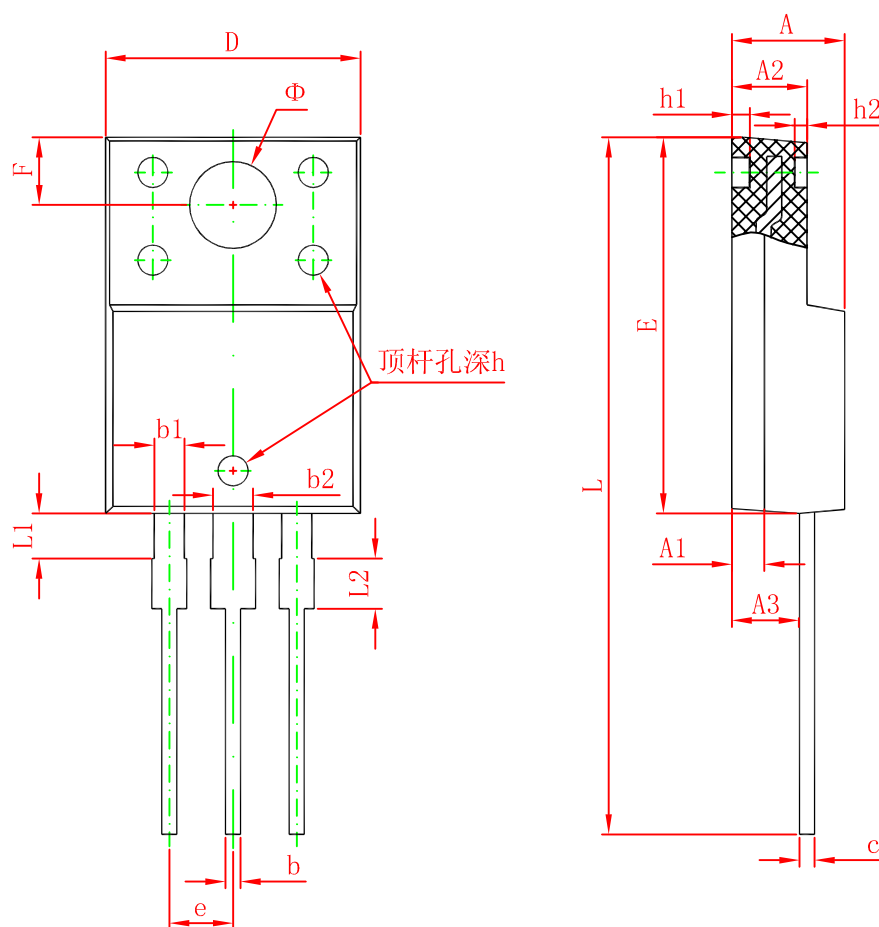


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

ITO-220AB Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.300	4.700	0.169	0.185
A1	1.300 REF.		0.051 REF.	
A2	2.800	3.200	0.110	0.126
A3	2.500	2.900	0.098	0.114
b	0.500	0.750	0.020	0.030
b1	1.100	1.350	0.043	0.053
b2	1.500	1.750	0.059	0.069
c	0.500	0.750	0.020	0.030
D	9.960	10.360	0.392	0.408
E	14.800	15.200	0.583	0.598
e	2.540 TYP.		0.100 TYP.	
F	2.700 REF.		0.106 REF.	
Φ	3.500 REF.		0.138 REF.	
h	0.000	0.300	0.000	0.012
h1	0.800 REF.		0.031 REF.	
h2	0.500 REF.		0.020 REF.	
L	28.000	28.400	1.102	1.118
L1	1.700	1.900	0.067	0.075
L2	1.900	2.100	0.075	0.083