MUR1610FCT THRU MUR1660FCT

Ultra-Fast Recovery Rectifier Diodes

Features

- Super-fast recovery time for high efficiency
- Glass passivated chip junction
- Low leakage current
- High forward surge capability
- Solder dip maximum peak of 275 °C /7s, per JESD 22-B106

Typical Application

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer ,computer and telecommunication.

Mechanical Data

- Package: ITO-220AB
  Molding compound meets UL 94 V-0 flammability rating,RoHS-compliant
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Color Band denotes cathode end

■ Maximum Ratings (Ta=25℃ Unless otherwise specified)

PARAMETER	Symbol	Unit	Conditions	MUR-FCT				
				1610	1615	1620	1640	1660
Repetitive Peak Reverse Voltage	V_{RRM}	V		100	150	200	400	600
Average Forward Current	I_O	A	60HZ Half-sine wave, Resistance load, Tc(Fig.1)	16				
Surge(Nonrepetitive)Forward Current	I_{FSM}	A	60HZ sine wave, 1 cycle, Ta=25℃	150				
Current Squared Time	$I^2 t$	A²s	1ms≤t＜8.3ms Tj=25℃,Rating of per diode	41				
Storage Temperature	T_{stg}	℃		-55 ~ +150				
Junction Temperature	T_j	℃		-55 ~ +150				

Electrical Characteristics（Ta=25℃ Unless otherwise specified）

PARAMETER	Symbol	Unit	Conditions		MUR-FCT				
					1610	1615	1620	1640	1660
Peak Forward Voltage	VFM	V	I_{FM}=8.0A		0.95			1.30	1.7
Peak Reverse Current	I_{RRM1}	µA	V_{RM}=V_{RRM}	Ta=25℃	10				
	I_{RRM2}			Ta=125℃	500				
Maximum reverse recovery time	Trr	ns	I_F=0.5A,I_R=1.0A,I_{rr}=0.25A		35				
Thermal Resistance	$R_{θJ-C}$	$R_{θJ-C}$	Between junction and case		2.0				

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■ Characteristics（Typical）
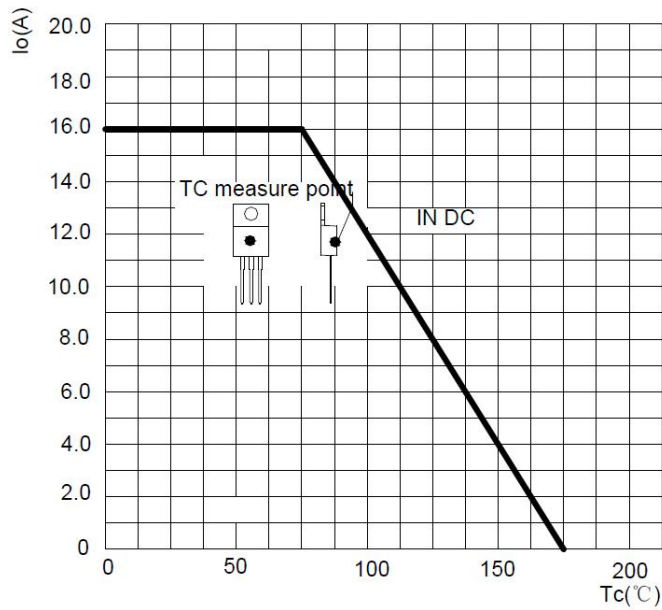
FIG1: Forward Current Derating Curve

TC measure point

IN DC

FIG2:Surge Forward Current Capability

8.3ms Single Half Sine-Wave (JEDEC Method)
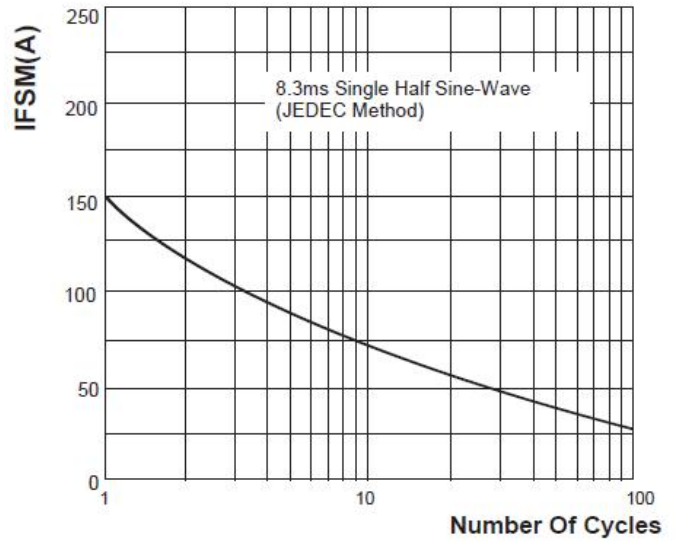
FIG3:Instantaneous Forward Voltage

MUR1610FCT-MUR1620FCT

MUR1640FCT

MUR1660FCT

Ta=25℃
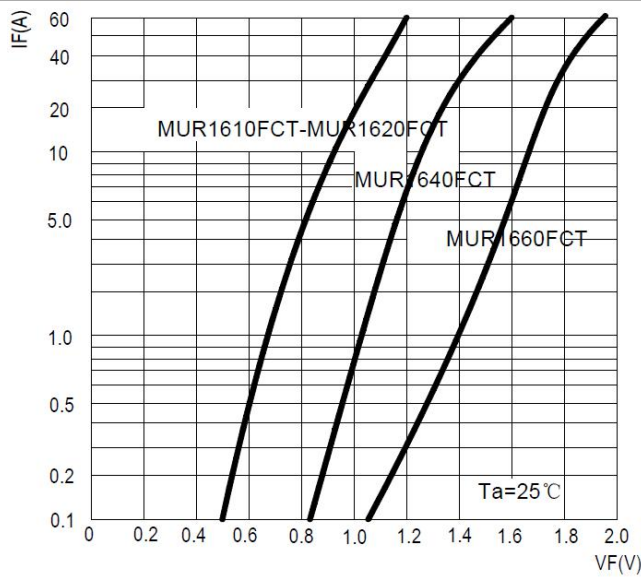
FIG4:Typical Reverse Characteristics

Tj=125℃

Tj=25℃
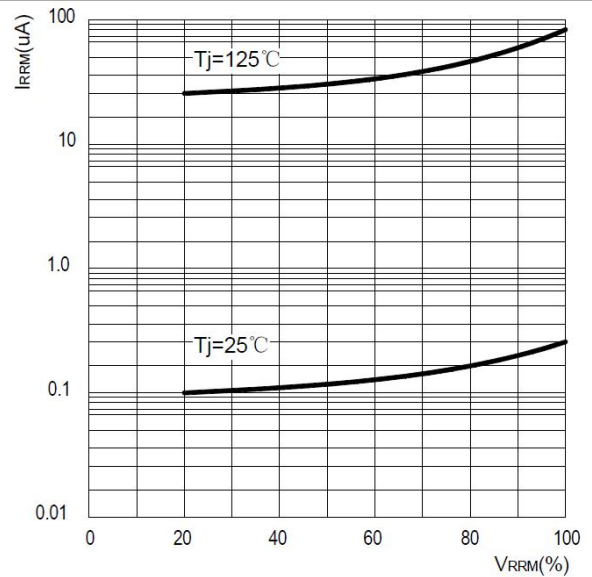
FIG5:Diagram of circuit and Testing wave form of reverse recovery time

50Ω NONINDUCTIVE

10Ω NONINDUCTIVE

DUT

(+)

(−)

1Ω NONINDUCTIVE

PULSE GENERATOR (NOTE2)

OSCILLOSCOPE (NOTE1)

(−)

(+)
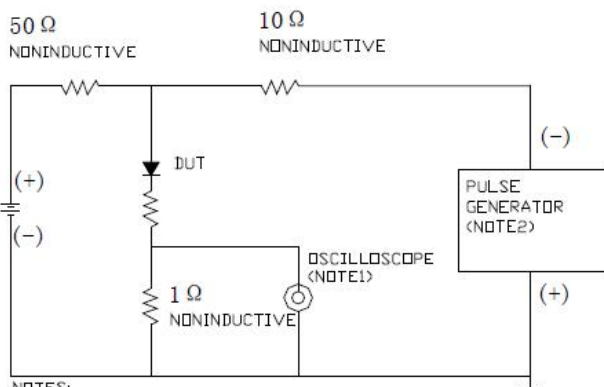
NOTES:
1.Rise Time=7ns max .Inpot Impedance=1MΩ 22pf
2.RIse TIme=10ns max.Sourse Impedance=50Ω

+0.5A

0

−0.25A

−1.0A

trr

1cm

SET TIME BASE FOR 5/10ns/cm

361° Circuit Protection System
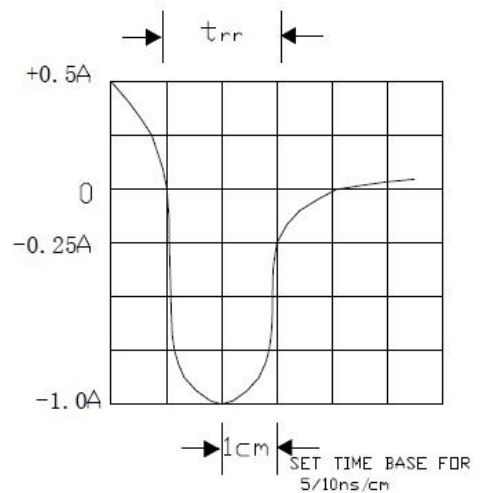
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■ Ordering Information (Example)

PREFERED	PACKAGE CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR1610FCT~MUR1660FCT	ITO-220AB	50	1000	5000	Tube

■ Outline Dimensions

ITO-220AB

.161(4.1) MAX

.134(3.4) .113(3.0) DIA

.406(10.3) MAX

.630(16.0) .614(15.6)

.543(13.8) .512(13.2)

PIN1 2 3

.55(1.4) MAX

.035(0.9) MAX

.099(2.51) .101(2.57)

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.185(4.7) MAX

.124(3.16) MAX

.110(2.8) .098(2.5)

.030(0.76) MAX

PIN1 — PIN2

PIN3 — CASE

Dimensions in inches and (millimeters)