TO-220AC Ultra-Fast Recovery Rectifier Diodes

Features

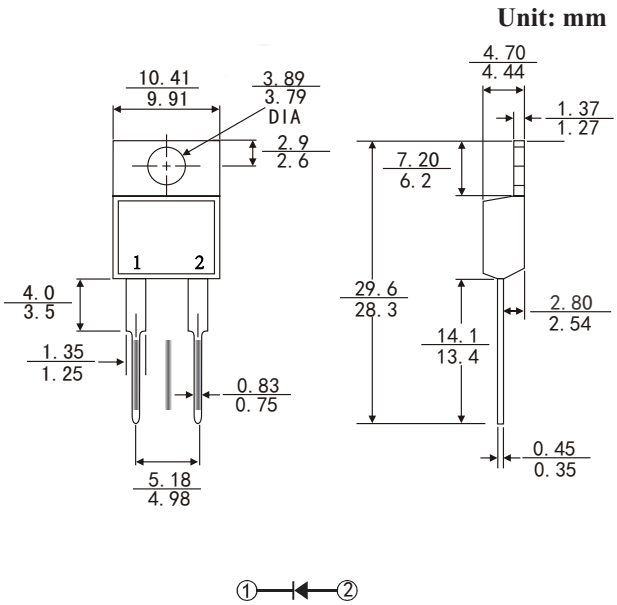
- Adopt FRED chip
- Low forward Voltage drop
- Fast reverse recovery time
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

Typical Applications

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

Mechanical Data

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



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

PARAMETER	SYMBOL	UNIT	MUR1560
Device marking code			MUR1560
Repetitive Peak Reverse Voltage	V_{RRM}	V	600
Average Rectified Output Current @60Hz sine wave, R-load, T_C(FIG.1)	I_O	A	15
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T_j=25℃	I_{FSM}	A	150
Current Squared Time @1ms≤t≤8.3ms Tj=25℃,	I^2t	A^2s	93
Storage Temperature	T_{stg}	℃	-55 ~ +175
Junction Temperature	T_j	℃	-55 ~ +175
Typical Junction capacitance @4V,1MHz	Cj	pF	92

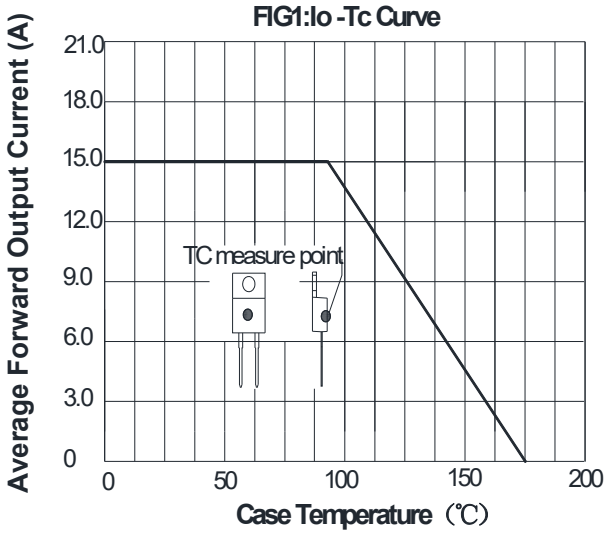
■Electrical Characteristics

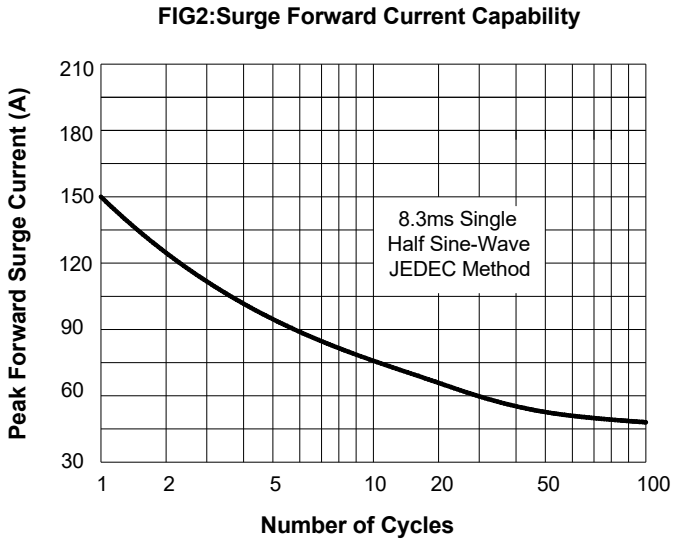
PARAMETER	SYMBOL	UNIT	TEST CONDITIONS		Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	IFM=15.0A @Tj=25℃		-	-	1.55
			IFM=15.0A @Tj=150℃		-	-	-
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	VRM=VRRM Tj=25℃		-	-	10
	I_{RRM2}		VRM=VRRM Tj=150℃		-	30	200
Reverse Recovery Time	T_{rr}	ns	IF=0.5A IRM=1A IRR=0.25A Tj=25℃		-		50
			Tj=25℃	IF=15A di/dt=-200A/us VRM=200V	-	-	-
			Tj=125℃		-	-	-
Peak recovery current	I_{RRM}	A	Tj=25℃		-	2.45	-
			Tj=125℃		-	5.75	-
Reverse recovery charge	Q_{rr}	nC	Tj=25℃		-	74.62	-
			Tj=125℃		-	200.70	-

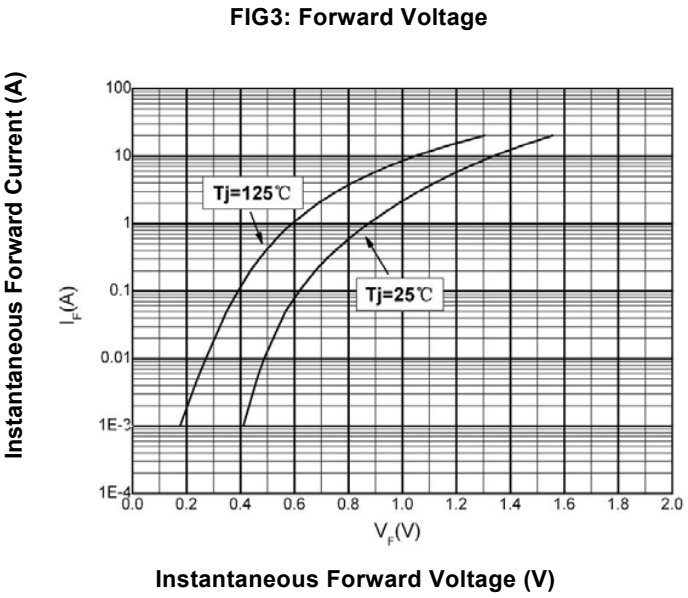
■Thermal Characteristics （Tj=25℃ Unless otherwise specified）

PARAMETER		SYMBOL	UNIT	MUR1560
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	℃/W	2.0
Thermal Resistance	Between junction and Air	$R_{\theta J-A}$	℃/W	50

■Characteristics (Typical)







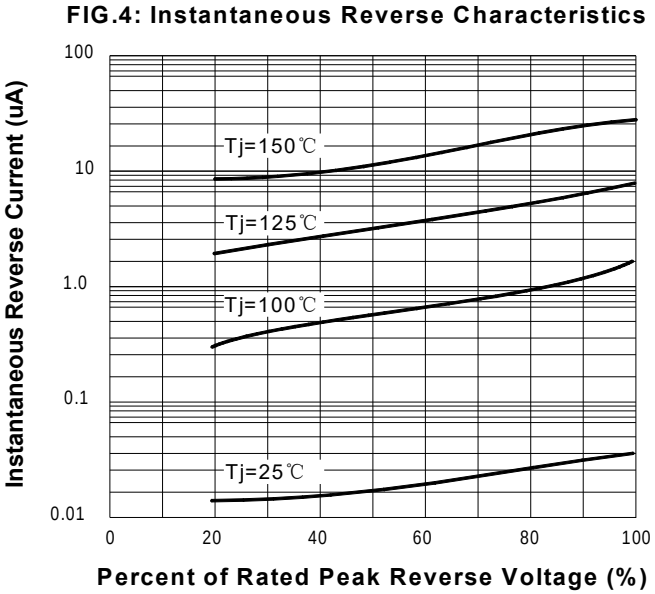
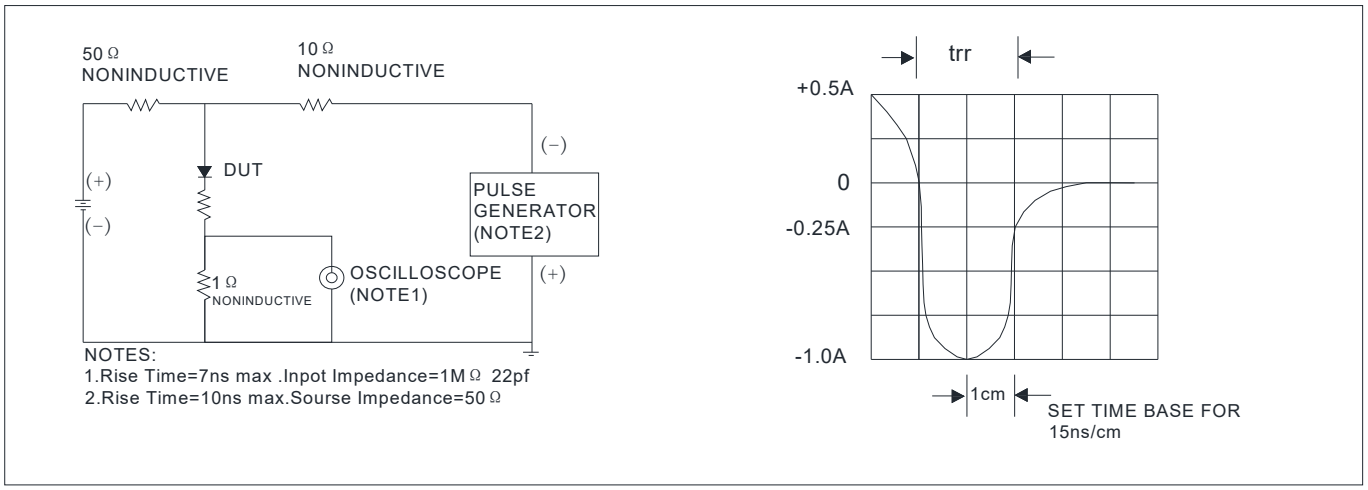



FIG.5: Diagram of circuit and Testing wave form of reverse recovery time