

TO-220AC Ultra-Fast Recovery Rectifier Diodes

Features

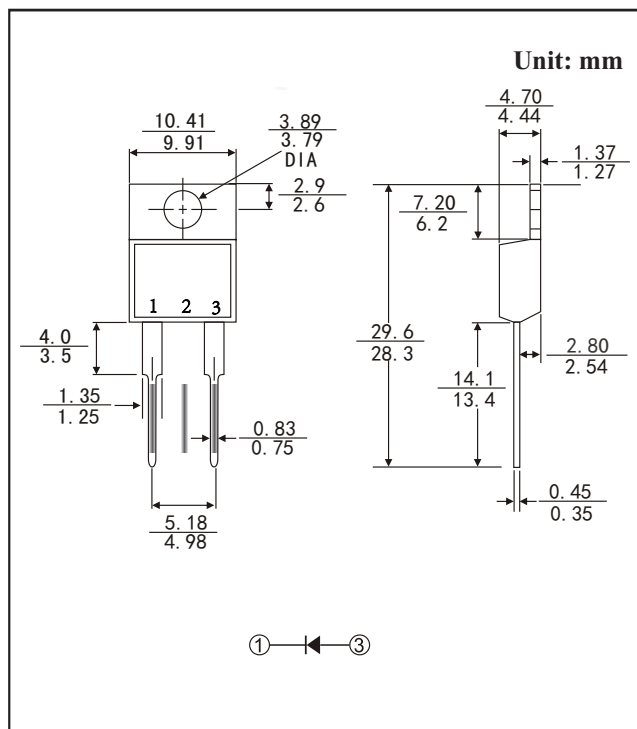
- Adopt FRED chip
- Low forward Voltage drop
- Fast reverse recovery time
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

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	VRRM	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°C	I _{FSM}	A	150
Current Squared Time @1ms≤t≤8.3ms T _j =25°C,	I ² t	A ² s	93
Storage Temperature	T _{stg}	°C	-55 ~ +175
Junction Temperature	T _j	°C	-55 ~ +175
Typical Junction capacitance @4V,1MHz	C _j	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°C	-	-	1.55
			IFM=15.0A @Tj=150°C	-	-	-
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	VRM=VRRM Tj=25°C	-	-	10
	I_{RRM2}		VRM=VRRM Tj=150°C	-	30	200
Reverse Recovery Time	T_{rr}	ns	IF=0.5A IRM=1A IRR=0.25A Tj=25°C	-	-	50
			Tj=25°C	-	-	-
			Tj=125°C	-	-	-
Peak recovery current	I_{RRM}	A	Tj=25°C	-	2.45	-
			Tj=125°C	-	5.75	-
Reverse recovery charge	Q_{rr}	nC	Tj=25°C	-	74.62	-
			Tj=125°C	-	200.70	-

■Thermal Characteristics (Tj=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MUR1560
Thermal Resistance	Between junction and case	RθJ-C	°CW	2.0
Thermal Resistance	Between junction and Air	RθJ-A	°CW	50

■ Characteristics (Typical)

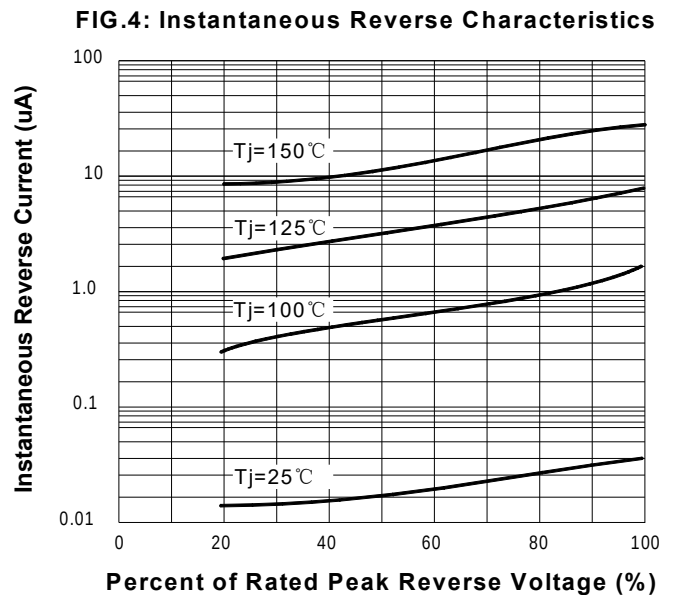
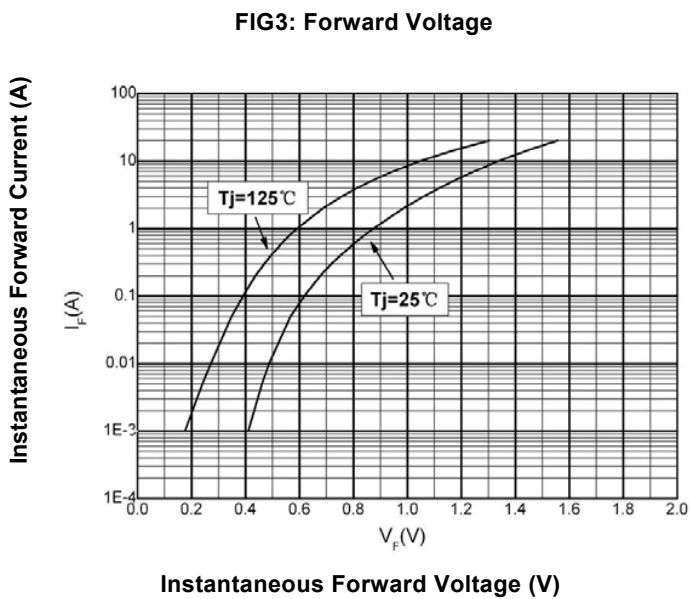
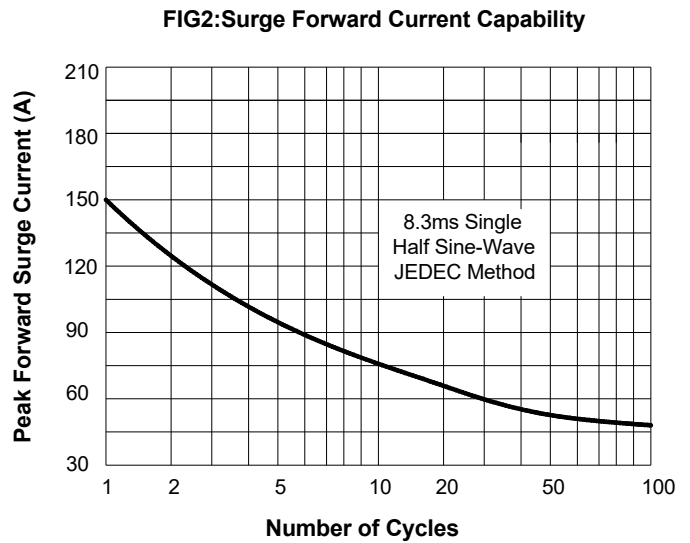
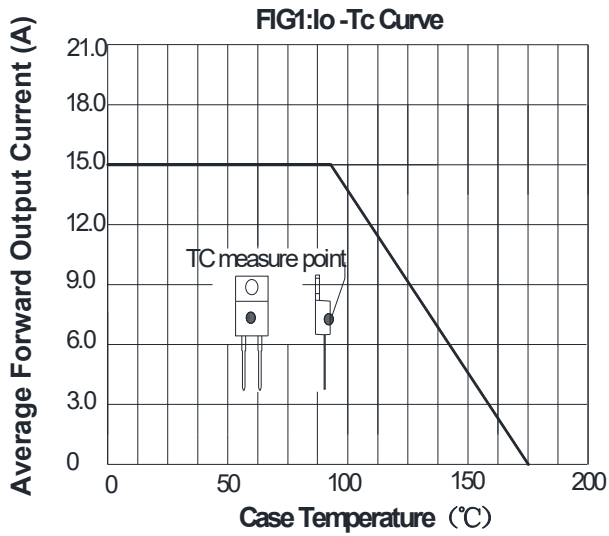


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

