

■ **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-263  
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

■ **MAXIMUM RATINGS** (Ta=25°C Unless otherwise specified )

PARAMETER	SYMBOL	UNIT	MURB3060CT
Device marking code			MURB3060CT
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V	600
Average Rectified Output Current @60Hz sine wave, R-load, Tc(FIG.1)	I <sub>o</sub>	A	30
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Tj=25°C	I <sub>FSM</sub>	A	150
Current Squared Time @1ms≤t≤8.3ms Tj=25°C,	I <sup>2</sup> t	A <sup>2</sup> s	93
Storage Temperature	T <sub>stg</sub>	°C	-55 ~ +175
Junction Temperature	T <sub>j</sub>	°C	-55 ~ +175
Junction capacitance @4V,1MHz	C <sub>j</sub>	pF	98

■ **THERMAL CHARACTERISTICS** (Ta=25°C Unless otherwise specified )

PARAMETER	SYMBOL	UNIT	MURB3060CT	
Thermal Resistance	Between junction and case	R <sub>θJ-C</sub>	°C/W	2.0
	Between junction and Air	R <sub>θJ-A</sub>	°C/W	50

■ **ELECTRICAL CHARACTERISTICS** ( $T_a=25^\circ\text{C}$  Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	$V_{FM}$	V	$I_{FM}=15.0A @T_j=25^\circ\text{C}$	-	1.45	1.60
			$I_{FM}=15.0A @T_j=150^\circ\text{C}$	-	1.25	1.40
DC reverse current at rated DC blocking voltage per diode	$I_{RRM1}$	uA	$V_{RM}=V_{RRM}$ $T_j=25^\circ\text{C}$	-	-	5
	$I_{RRM2}$		$V_{RM}=V_{RRM}$ $T_j=150^\circ\text{C}$	-	-	200
Reverse Recovery Time	$T_{rr}$	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_j=25^\circ\text{C}$	-	26	35-
			$T_j=25^\circ\text{C}$	-	115	-
			$T_j=125^\circ\text{C}$	-	200	-
Peak recovery current	$I_{RRM}$	A	$T_j=25^\circ\text{C}$	-	5.0	-
			$T_j=125^\circ\text{C}$	-	10.5	-
Reverse recovery charge	$Q_{rr}$	nC	$T_j=25^\circ\text{C}$	-	285	-
			$T_j=125^\circ\text{C}$	-	1000	-

■ **CHARACTERISTICS (TYPICAL)**

FIG1:  $I_o$  -  $T_c$  Curve

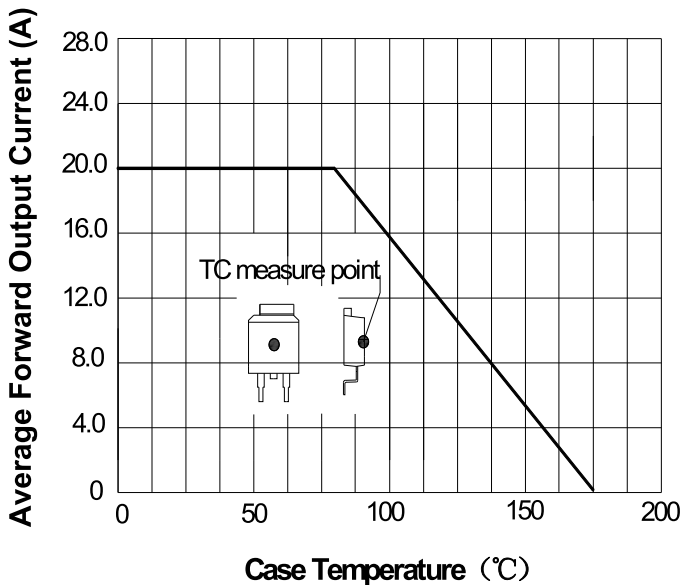
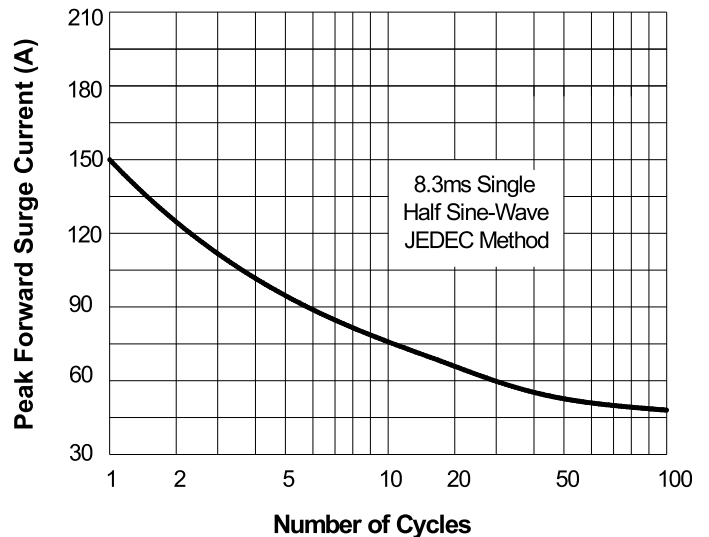
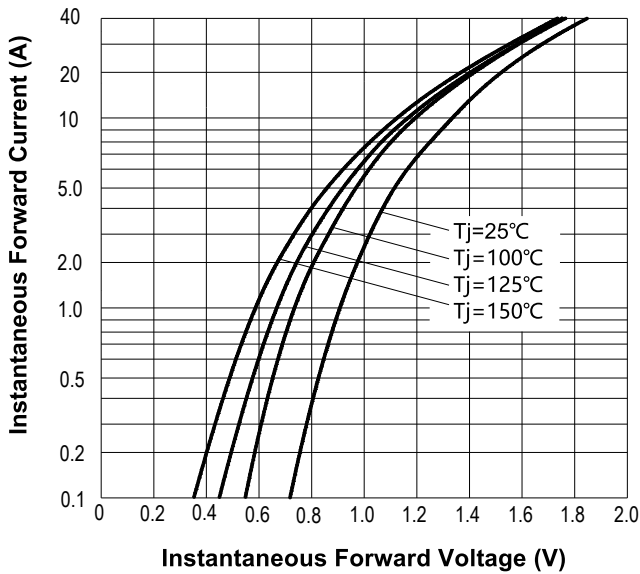


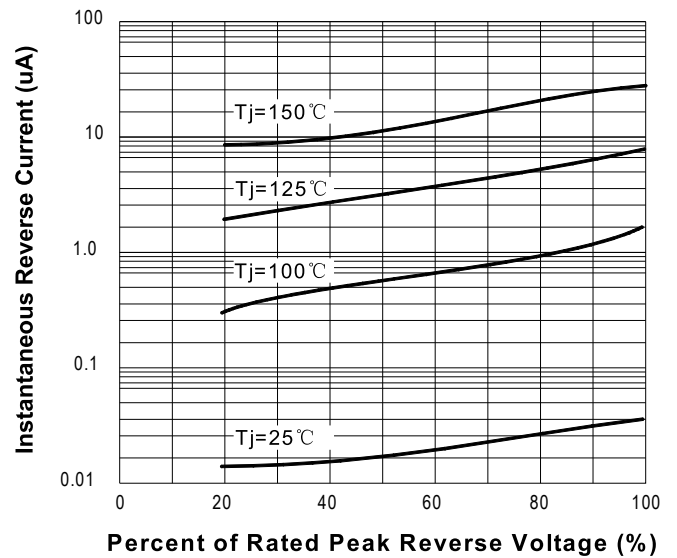
FIG2: Surge Forward Current Capability



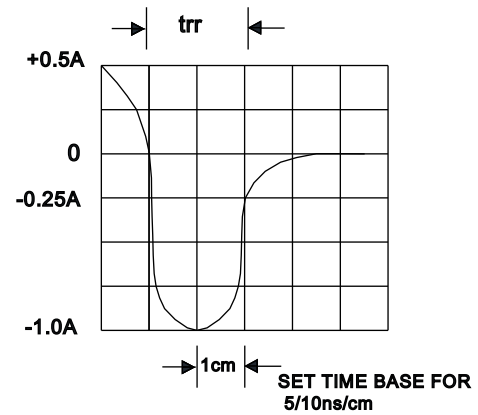
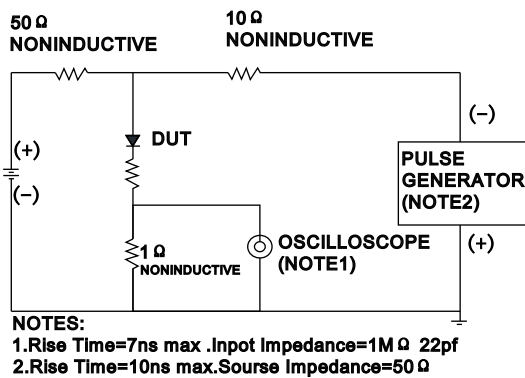
**FIG3: Forward Voltage**



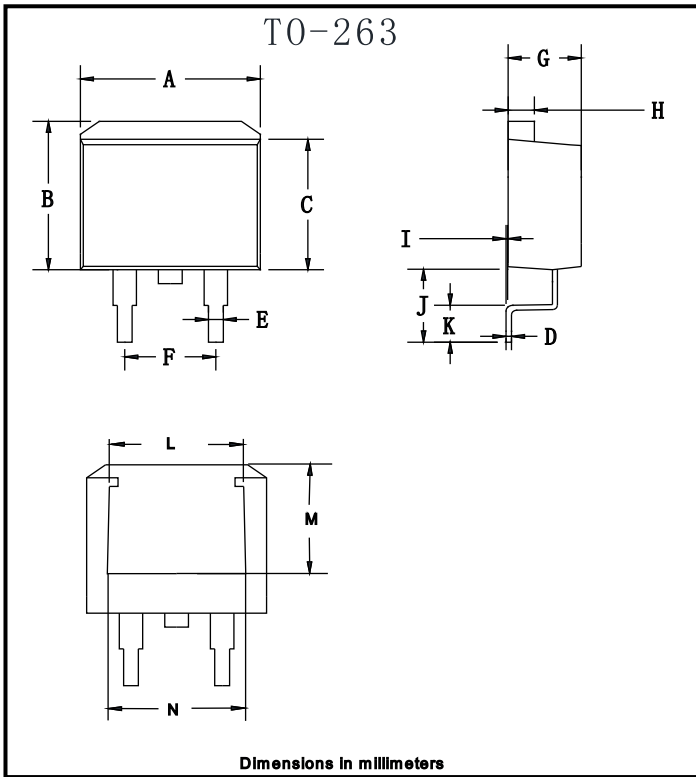
**FIG.4: Instantaneous Reverse Characteristics**



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

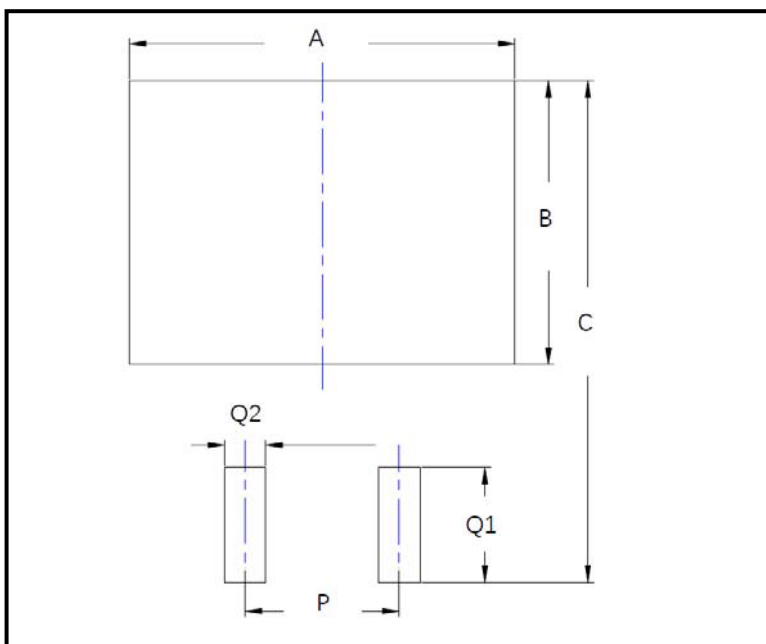


■ **OUTLINE DIMENSIONS**



TO-263		
Dim	Min	Max
A	9.5	11.5
B	9.7	10.5
C	8.4	9.0
D	0.28	0.64
E	0.68	0.94
F	4.55	5.6
G	4.04	5.10
H	1.14	1.4
I	0	0.2
J	4.9	6.05
K	1.79	2.79
L	7.3	7.9
M	6.2	6.8
N	7.6	8.2

■ **SUGGESTED PAD LAYOUT**



Dim	Millimeters
A	12.7
B	9.4
C	16.6
P	5.08
Q1	3.8
Q2	1.35