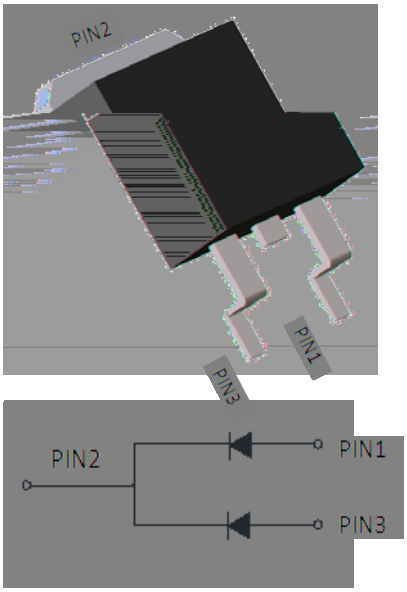
Ultra-Fast Recovery Diodes 5A*2 FRED



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 (T_j=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	MURB1020CT
Device marking code			MURB1020CT
Repetitive Peak Reverse Voltage	V_{RRM}	V	200
Average Rectified Output Current @60Hz sine wave, R-load, T_C(FIG.1)	I_O	A	10
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T_j=25	I_{FSM}	A	50
Current Squared Time @1ms≤t≤8.3ms Tj=25	I^2t	A^2s	10
Storage Temperature	Tstg		-55 ~ +175
Junction Temperature	Tj		-55 ~ +175
Typical Junction capacitance @4V,1MHz	Cj	pF	50

■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS		Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	I_{FM}=5.0A @Tj=25		-	0.90	1.0
			I_{FM}=5.0A @Tj=150			0.78	0.9
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	V_{RM}=V_{RRM} Tj=25		-	-	5.0
	I_{RRM2}		V_{RM}=V_{RRM} Tj=150		-	25	50
Reverse Recovery Time	Trr	ns	I_F=0.5A I_{RM}=1A I_{RR}=0.25A Tj=25		-	25	35
			Tj=25	IF=5A di/dt=-200A/us VRM=100V	-	17.4	-
			Tj=125		-	29.4	
Peak recovery current	I_{RRM}	A	Tj=25		-	3.11	-
			Tj=125		-	5.43	-
Reverse recovery charge	Qrr	nC	Tj=25		-	29.64	-
			Tj=125		-	80	-

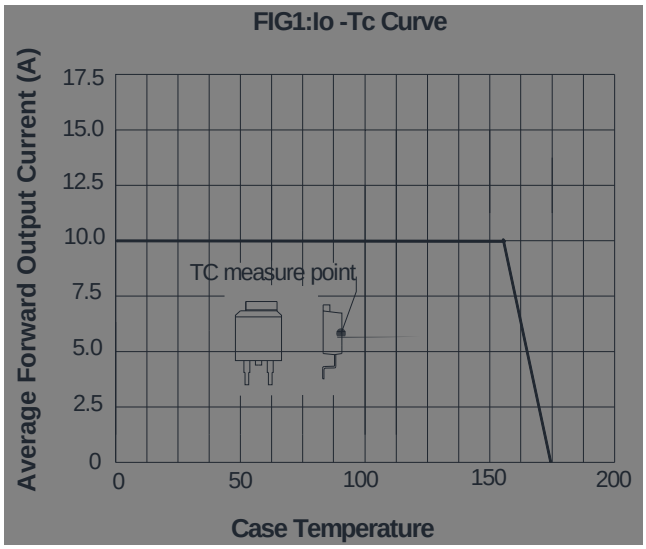
■Thermal Characteristics Tj=25 Unless otherwise specified

PARAMETER		SYMBOL	UNIT	MURB1020CT
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

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURB1020CT	Approximate 1.43	50	2000	8000	Tube
MURB1020CT	Approximate 1.43	1000	2000	10000	Reel

■Characteristics (Typical)



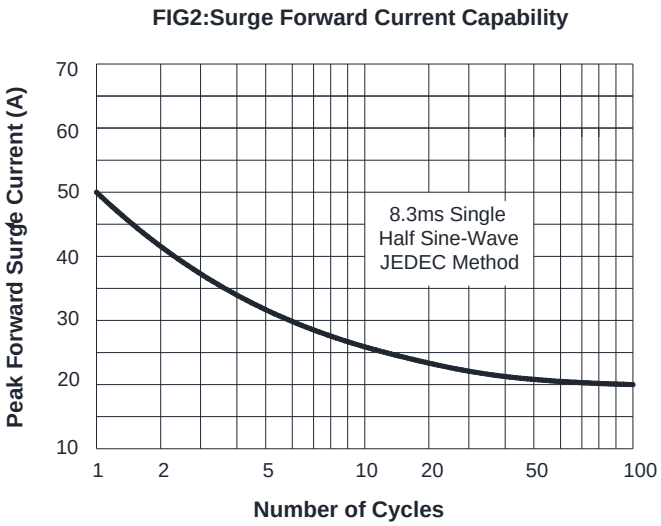
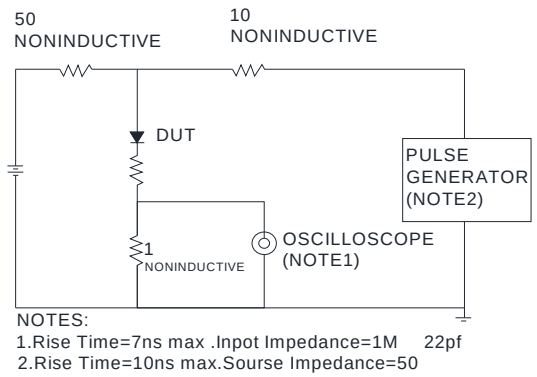
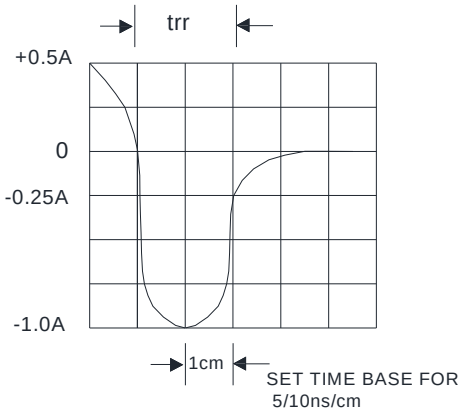
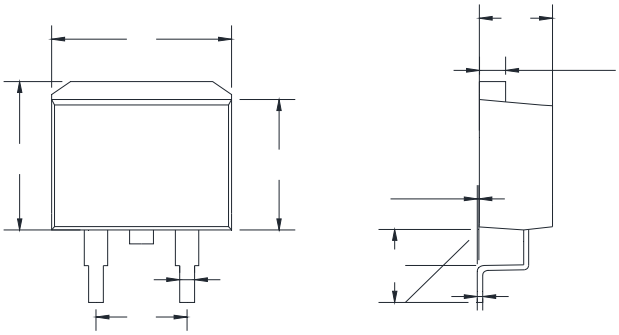


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time





■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

Dimensions in millimeters

■ Suggested Pad Layout



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

Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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