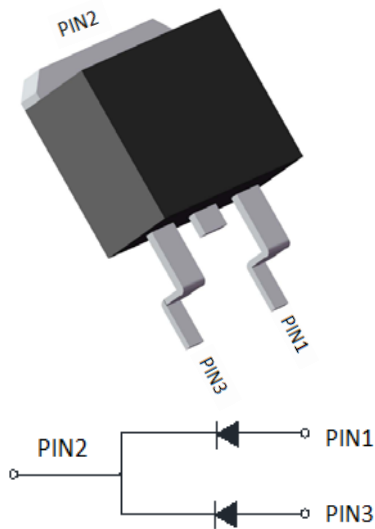


Ultra-Fast Recovery Diodes 5A*2 FRED



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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURB1060CT
Device marking code			MURB1060CT
Repetitive Peak Reverse Voltage	V _{RRM}	V	600
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°C	I _{FSM}	A	50
Current Squared Time @1ms≤t≤8.3ms T _j =25°C,	I ² t	A ² s	10
Storage Temperature	T _{stg}	°C	-55 ~ +175
Junction Temperature	T _j	°C	-55 ~ +175
Typical Junction capacitance @4V,1MHz	C _j	pF	20



MURB1060CT-F2-W5094HF

■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=5.0A$ @ $T_J=25^{\circ}C$	-	1.45	1.6
			$I_{FM}=5.0A$ @ $T_J=150^{\circ}C$		1.15	1.3
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	$V_{RM}=V_{RRM}$ $T_J=25^{\circ}C$	-	-	5.0
	I_{RRM2}		$V_{RM}=V_{RRM}$ $T_J=150^{\circ}C$	-	35	200
Reverse Recovery Time	T_{rr}	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_J=25^{\circ}C$	-	25	35
			$T_J=25^{\circ}C$	-	50.8	-
			$T_J=125^{\circ}C$	-	81.8	-
Peak recovery current	I_{RRM}	A	$T_J=25^{\circ}C$	-	3.06	-
			$T_J=125^{\circ}C$	-	5.07	-
Reverse recovery charge	Q_{rr}	nC	$T_J=25^{\circ}C$	-	78.88	-
			$T_J=125^{\circ}C$	-	280	-

■Thermal Characteristics ($T_J=25^{\circ}C$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MURB1060CT
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}C/W$	2.0
Thermal Resistance	Between junction and Air	$R_{\theta J-A}$	$^{\circ}C/W$	50

■Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURB1060CT	Approximate 1.43	800	/	8000	13° Reel



■ Characteristics (Typical)

FIG1: I_o - T_c Curve

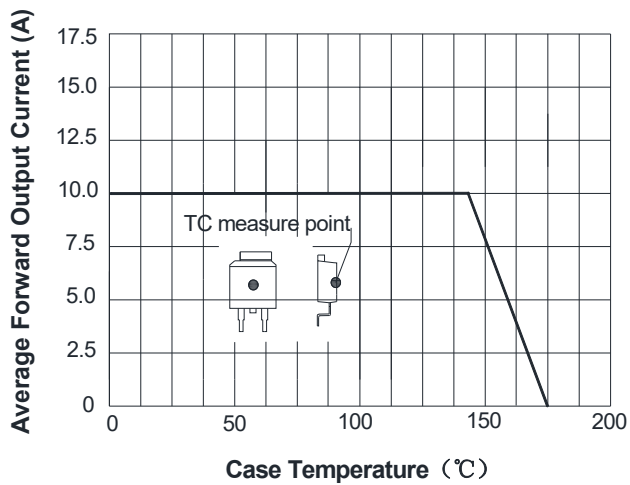


FIG2: Surge Forward Current Capability

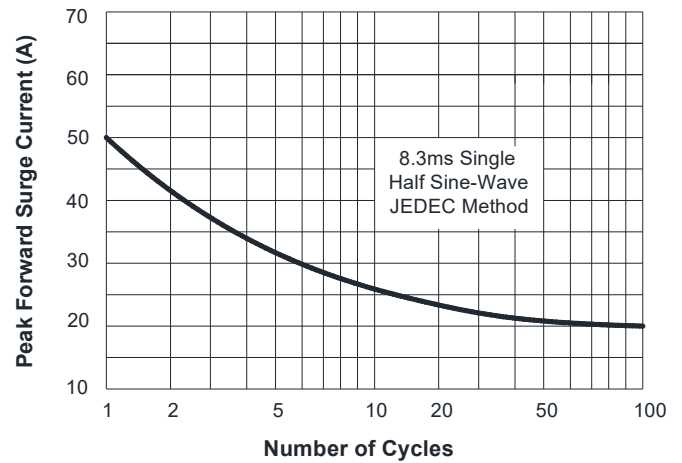


FIG3: Forward Voltage

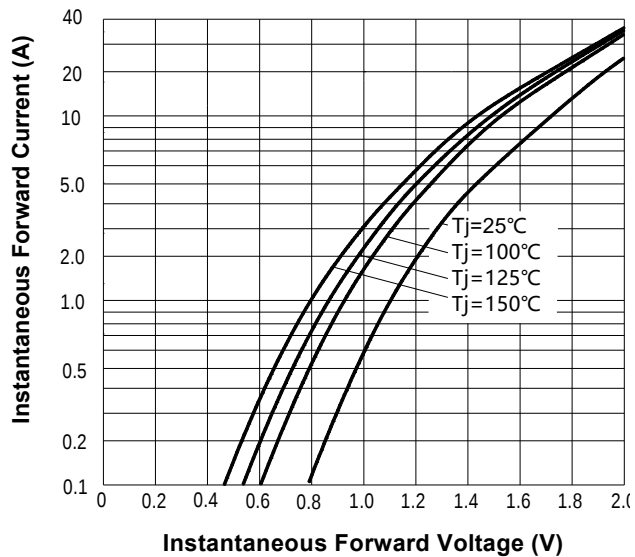


FIG4: Instantaneous Reverse Characteristics

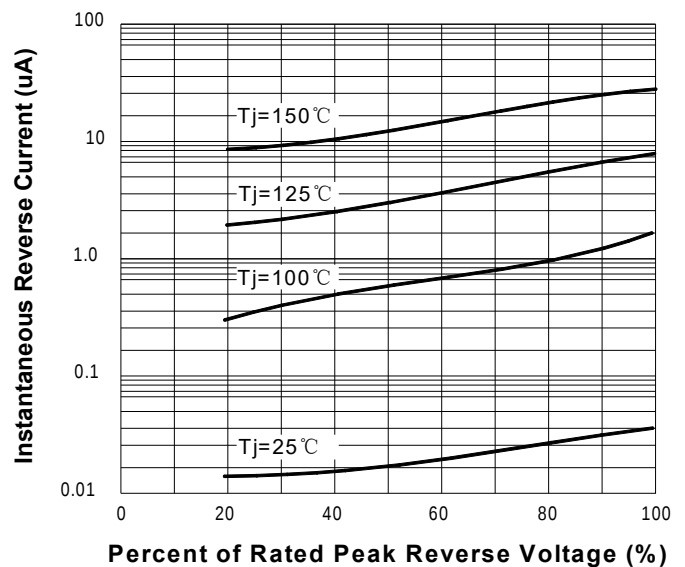
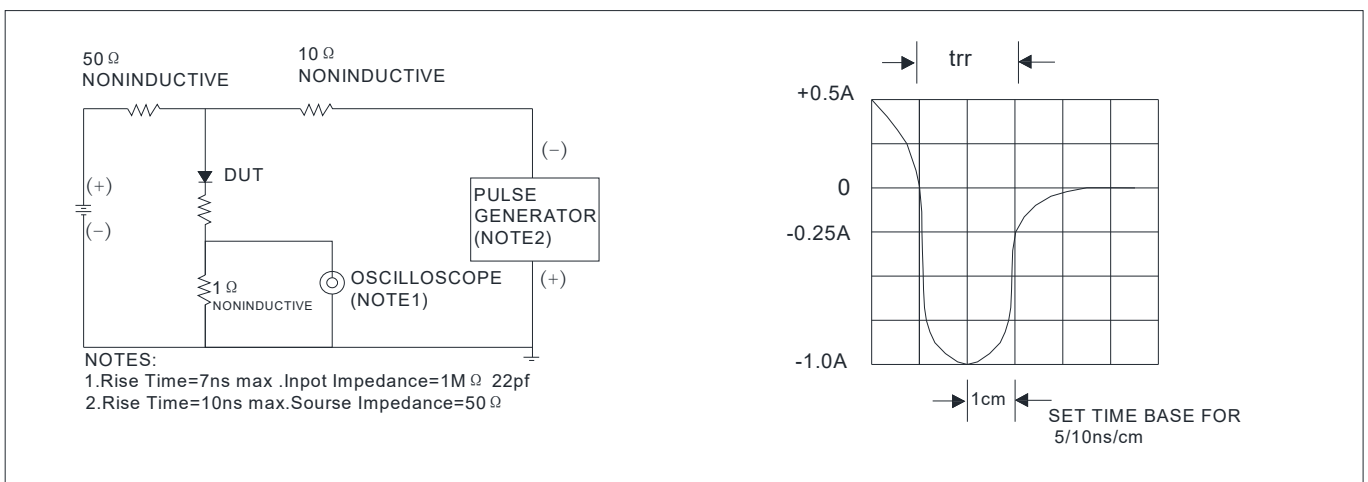


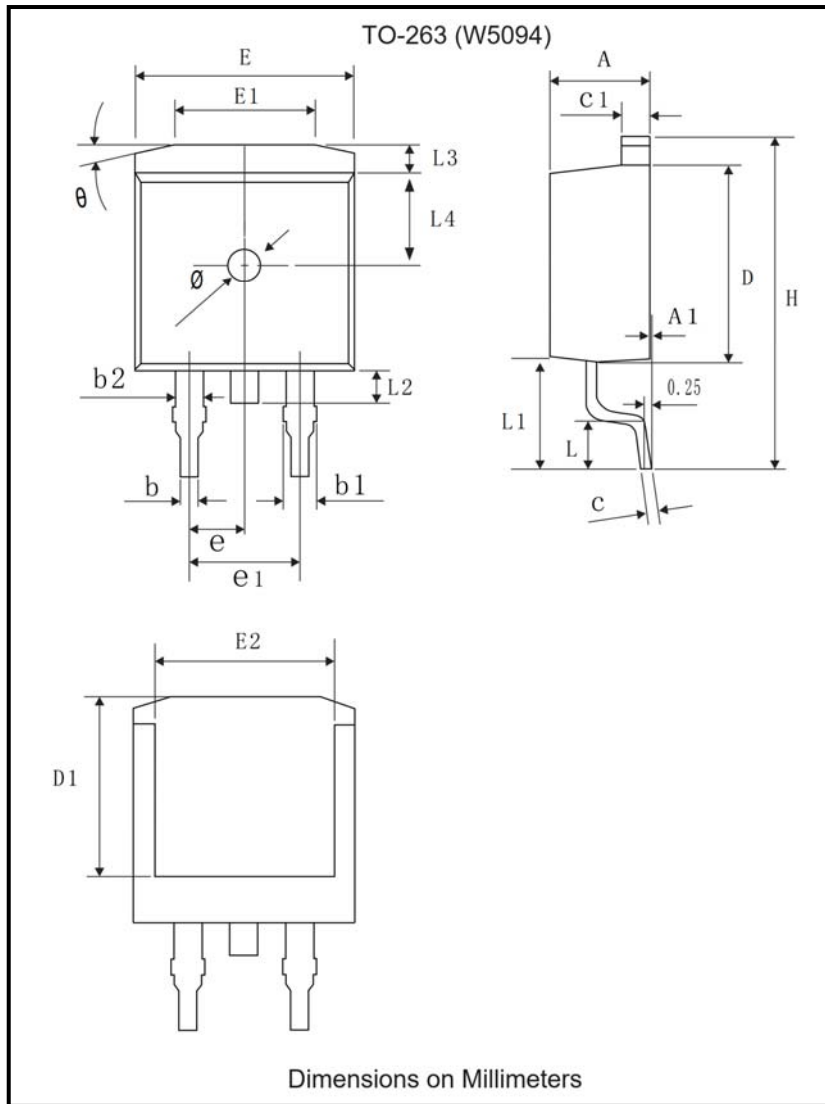
FIG5: Diagram of circuit and Testing wave form of reverse recovery time





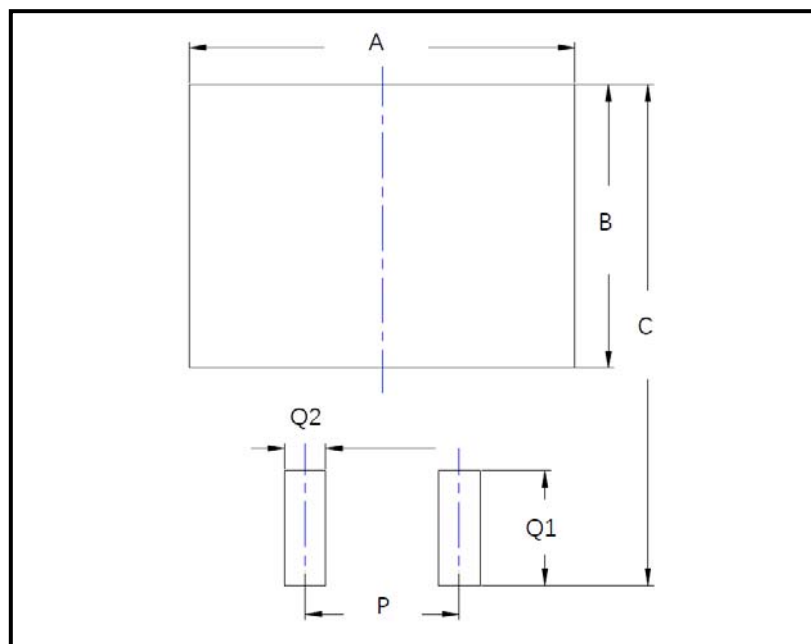
MURB1060CT-F2-W5094HF

■ Outline Dimensions



TO-263		
Dim	Min	Max
A	4.30	4.70
A1	0.00	0.25
b	0.70	0.90
B1	1.17	1.37
B2	1.17	1.37
C	0.40	0.60
C1	1.25	1.35
D	9.00	9.20
D1	8.00	8.20
H	14.9	15.5
E	9.80	10.2
E1	6.30	6.50
E2	7.90	8.10
e1	4.93	5.23
L	1.85	2.45
L1	4.45	4.85
L2	1.30	1.70
L3	1.15	1.35
L4	4.50	4.60
Ø	1.5 REF	
e	2.54 BSC	
θ	13°TYP	

■ Suggested Pad Layout



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



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