Ultra-Fast Recovery Diodes 5A 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 (Tj=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	MURB540
Device marking code			MURB540
Repetitive Peak Reverse Voltage	V_{RRM}	V	400
Average Rectified Output Current @60Hz sine wave, R-load, Tc(FIG.1)	I_O	A	5
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Tj=25	I_{FSM}	A	50
Current Squared Time @1ms≤t≤8.3ms Tj=25	I^2t	A^2s	10
Storage Temperature	T_{stg}		-55 ~ +175
Junction Temperature	Tj		-55 ~ +175
Typical Junction capacitance @4V,1MHz	Cj	pF	50

085%

v(OHFWULFDO &KDUDFWHULVWLFV

3$5$0(7(5	6<0%2	81,7	7(67 &21',7,216		0LQ	7\S	0D[
,QVWDQWDQHRXV IRUZDUG YROWDJH GURS SHU GLRGH	,0	9	,0 $ # 7M-				
			,0 $ # 7M -				
'& UHYHUVH FXUUHQW DW UDWHG '& EORFNLQJ YROWDJH SHU GLRGH	,550	X$	9 50 9 550 7M -				
	,550		9 50 9 550 7M -				
5HYHUVH 5HFRYHU\ 7LPH	55	QV	,) $ 50, $ 55 $ 7M -				
			7M -				
			7M -				
3HDN UHFRYHU\ FXUUHQW	550	$	7M -	,) $ GL GW 9 50 9	$ XV		
			7M -				
5HYHUVH UHFRYHU\ FKDUJH		Q&	7M -				
			7M -				

v7KHUPDO &KDUDÄ7WHUL8QWLFW RWKHUÅLVH VSHFLILHG

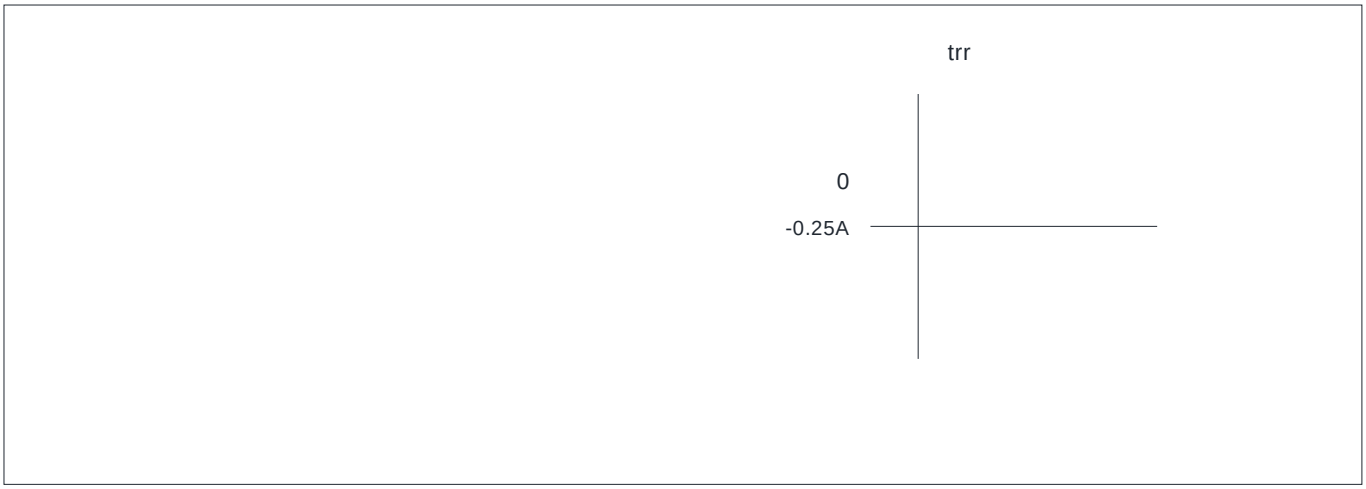
3$5$0(7(5		6<0%2/	81,7	085%
7KHUPDO 5HVLVWDQFH	%HWZHHQ MXQFWLRQ DQG FDVH	&	:	5
	%HWZHHQ MXQFWLRQ DQG $LU	$	:	5

v2UGHULQJ ,QIRUPDWLRQ

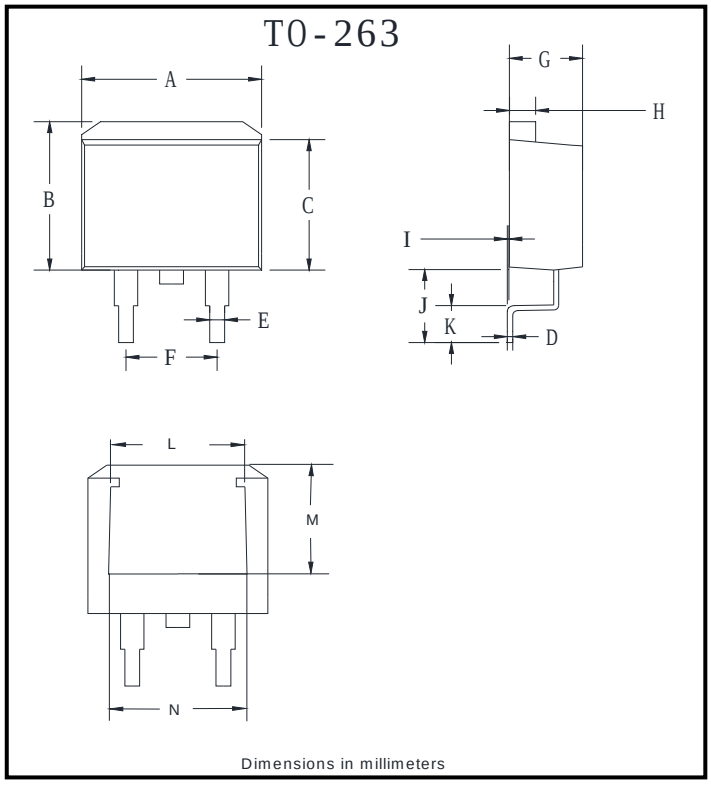
35()(5(' 3 1	81,7 :(,*+7 J	0,1,,080 3$&.$*(SFV	,11(5 %2; 48$17,7< SF	287(5 &$5721 48$17,7< SF	'(/,9(5< 02'(	
085%	$SSUR[LPDWH					7XEH
085%	$SSUR[LPDWH					5HHO

■**Characteristics** (Typical)

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

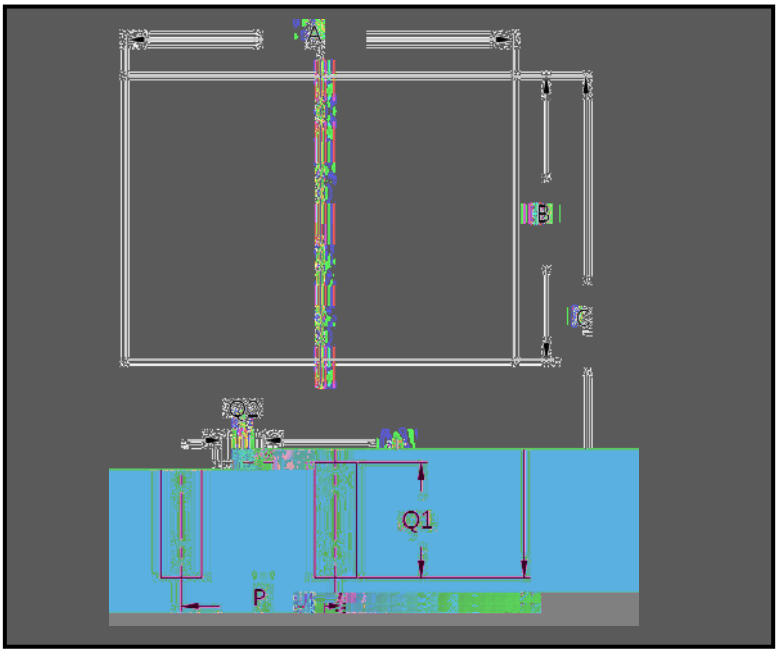


■Outline Dimensions



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

■ 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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