

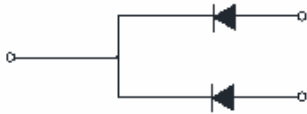
Ultra-Fast Recovery Diodes 8A*2 FRED

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.

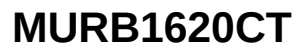


Mechanical Data

- **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			
Repetitive Peak Reverse Voltage	V _{RRM}	V	200
Average Rectified Output Current @60Hz sine wave, R-load (Figs.1)	I _O	A	16
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle (Fig.2)	I _{FSM}	A	100
Current Squared Time @1ms≤t≤8.3ms T _j =25	I ² t	A ² s	41
Storage Temperature	T _{stg}		-55 ~ +175
Junction Temperature	T _j		-55 ~ +175
Typical Junction capacitance @4V,1MHz	C _j	pF	70



PARAMETER	UNIT	Min	Typ	Max		
Instantaneous forward voltage drop per diode	V_{FM}	V	IFM=8.0A @Tj=25	-	0.90	1.0
			IFM=8.0A @Tj=150		0.78	0.9
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	μA	VRM=VRRM Tj=25	-	-	5
	I_{RRM2}		VRM=VRRM Tj=150	-	20	50
			IF=0.5A I _{RM} =1A I _{RR} =0.25A Tj=25	-	25	35
Reverse Recovery Time	Trr	ns	Tj=25			

2 / 5

■Characteristics (Typical)

FIG1:Io -Tc Curve

Average Forward Output Current (A)

Case Temperature

FIG2:Surge Forward Current Capability

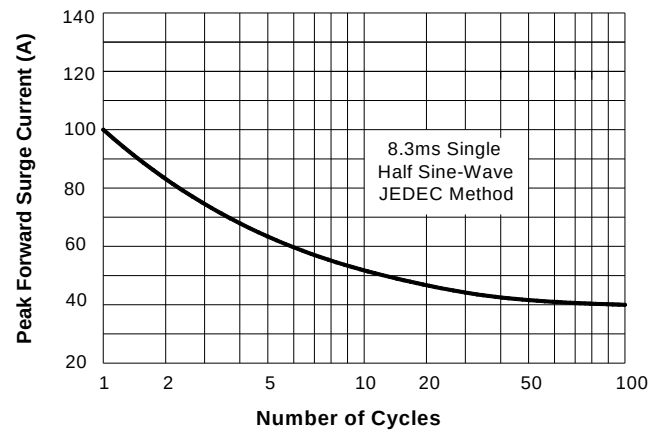
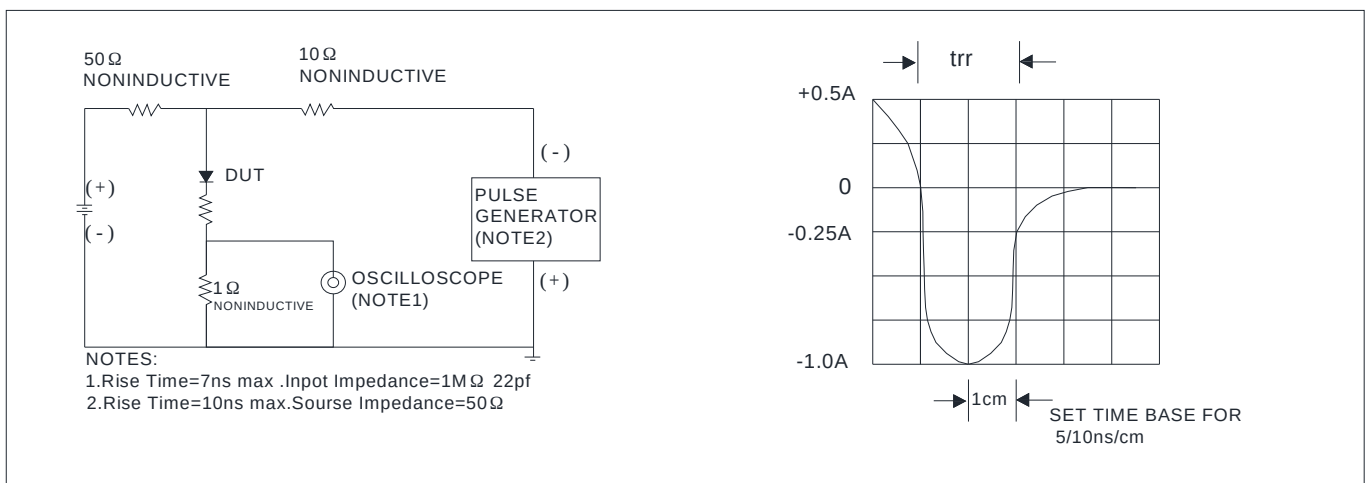


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

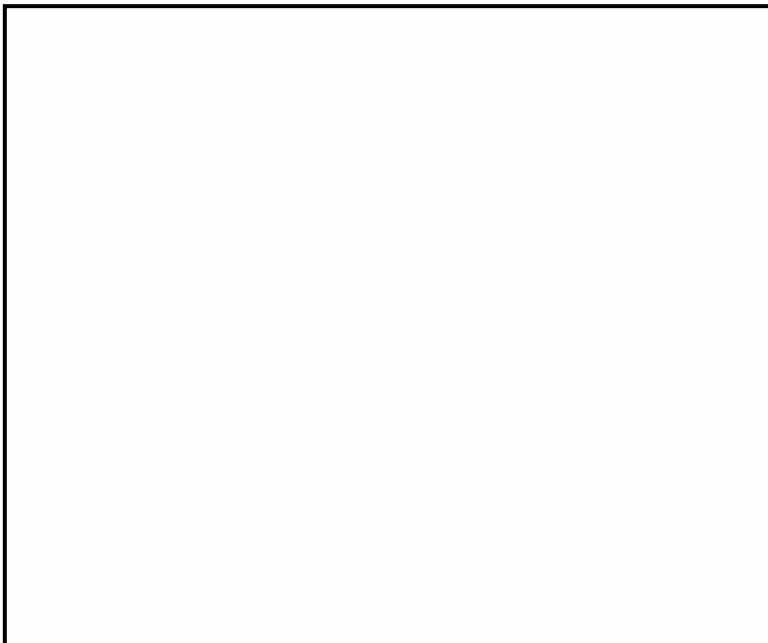




■ Outline Dimensions

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 Q2	3.8



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