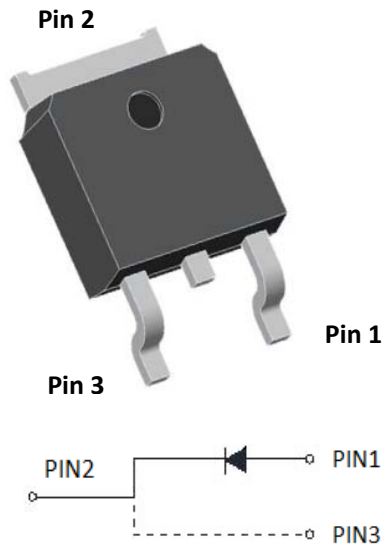


Ultra-Fast Recovery Diodes 5A FRED Pt



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-252
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	MUR560D
Device marking code			MUR560D
Repetitive Peak Reverse Voltage	V_{RRM}	V	600
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, Ta=25°C	I_{FSM}	A	50
Current Squared Time @1ms≤t≤8.3ms Tj=25°C,	I^2t	A ² s	10
Storage Temperature	T_{stg}	°C	-55 ~ +150
Junction Temperature	T_j	°C	-55 ~ +150
Junction capacitance @4V,1MHz	C_j	pF	20



MUR560D

■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	$V_{RM}=V_{RRM}$ $T_j=25^\circ C$	-	-	10	
	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	
Peak recovery current	I_{RRM}	A	$T_j=25^\circ C$	$I_F=5A$ $di/dt=-200A/us$ $V_{RM}=200V$	-	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 ($T_a=25^\circ C$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MUR560D
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^\circ C/W$	5.0
	Between junction and Air	$R_{\theta J-A}$	$^\circ C/W$	50

■Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR560D	Approximate 0.31	2500	2500	25000	Reel

■Characteristics (Typical)

FIG1: $I_o - T_c$ Curve

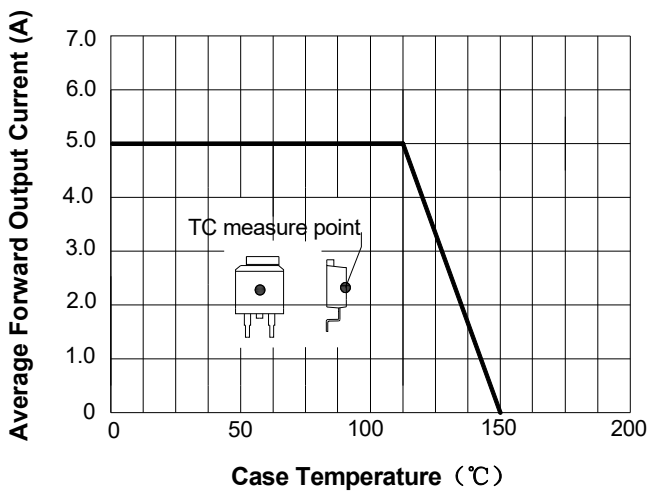
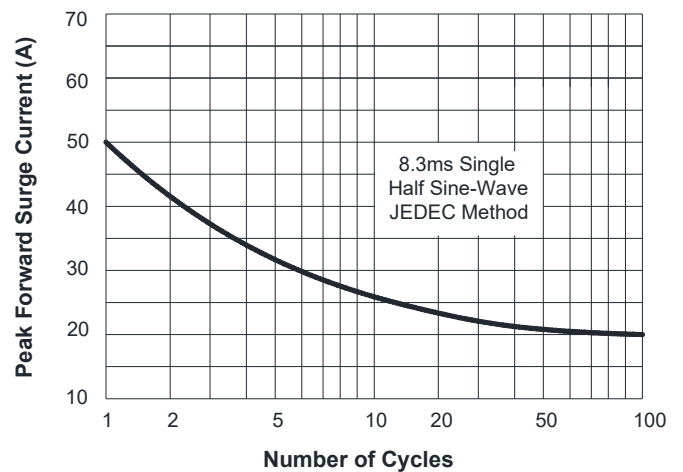


FIG2: Surge Forward Current Capability





MUR560D

FIG3: Forward Voltage

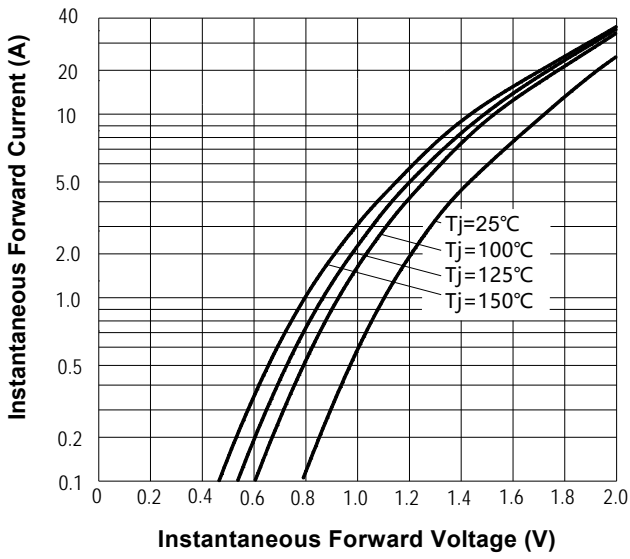


FIG.4: Instantaneous Reverse Characteristics

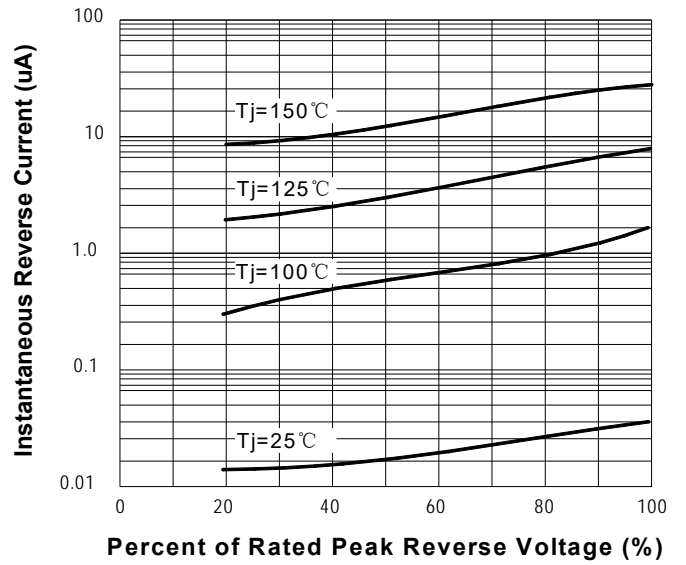
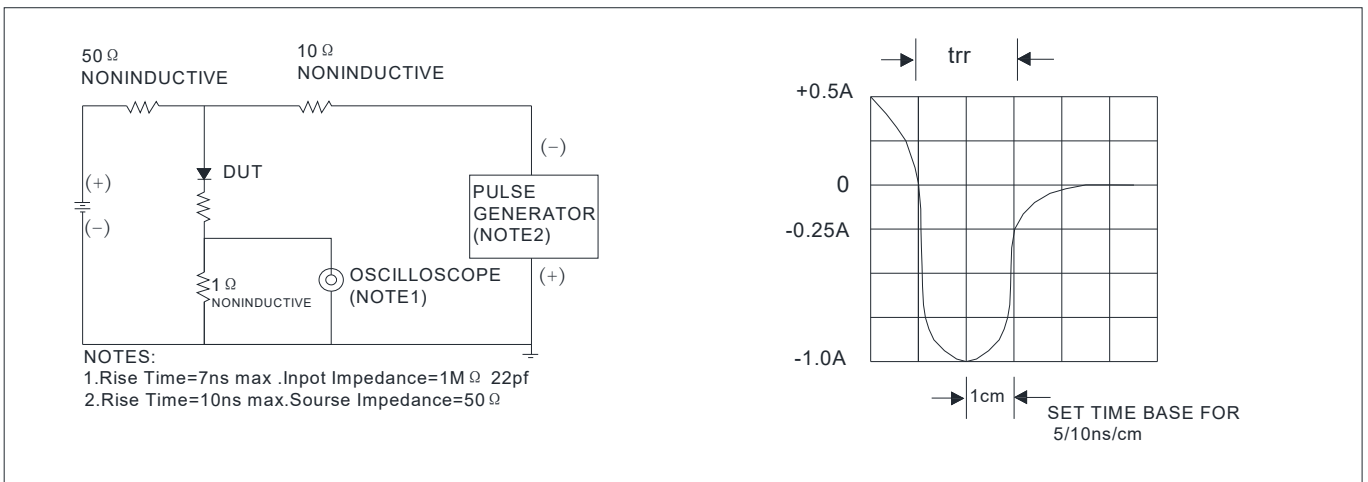


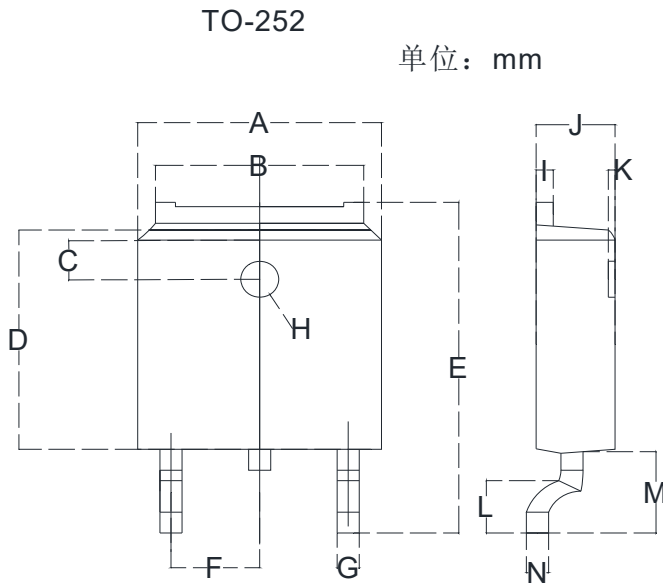
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time





MUR560D

■Outline Dimensions



TO-252		
Dim	Min	Max
A	6.500	6.700
B	5.100	5.460
C	1.400	1.800
D	6.000	6.200
E	10.000	10.400
F	2.166	2.366
G	0.660	0.860
H	$\Phi 1.050$	$\Phi 1.350$
I	0.460	0.580
J	2.200	2.400
K	0	0.300
L	0.890	2.290
M	2.730	3.080
N	0.430	0.580



MUR560D

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