



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

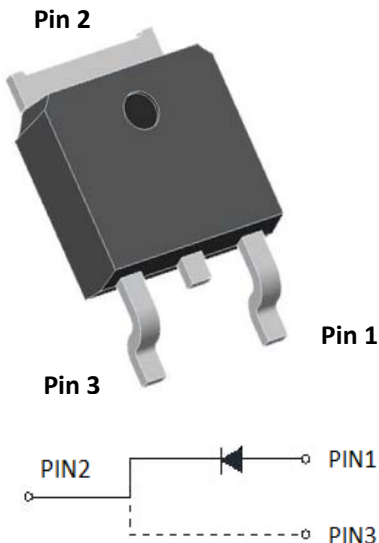
Package: TO-252

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

TO-252



Maximum Ratings (T_j=25°C Unless otherwise specified)

	V _{RSM} V	V _{RRM} V
MUR320D	200	200

PARAMETER	SYMBOL	UNIT	MUR320D
Device marking code			MUR320D
Repetitive Peak Reverse Voltage	V _{RRM}	V	200
Average Rectified Output Current @60Hz sine wave, R-load, T _c (FIG.1)	I _O	A	3
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _j =25°C	I _{FSM}	A	60
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	50

■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=3.0A$ @ $T_j=25^{\circ}C$	-	0.90	1.0
			$I_{FM}=3.0A$ @ $T_j=150^{\circ}C$		0.78	0.9
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	μA	$V_{RM}=V_{RRM}$ $T_j=25^{\circ}C$	-	-	5
	I_{RRM2}		$V_{RM}=V_{RRM}$ $T_j=150^{\circ}C$	-	25	50
Reverse Recovery Time	T_{RR}	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_j=25^{\circ}C$	-	22	28
			$T_j=25^{\circ}C$	-	17.1	-
			$T_j=125^{\circ}C$	-	30.1	-
Peak recovery current	I_{RRM}	A	$T_j=25^{\circ}C$	-	3.11	-
			$T_j=125^{\circ}C$	-	5.43	-
Reverse recovery charge	Q_{rr}	nC	$T_j=25^{\circ}C$	-	26.4	-
			$T_j=125^{\circ}C$	-	81.5	-

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

PARAMETER		SYMBOL	UNIT	MUR320D
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)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR320D	Approximate 0.31	2500	2500	25000	Reel

FIG1: I_o - T_c Curve

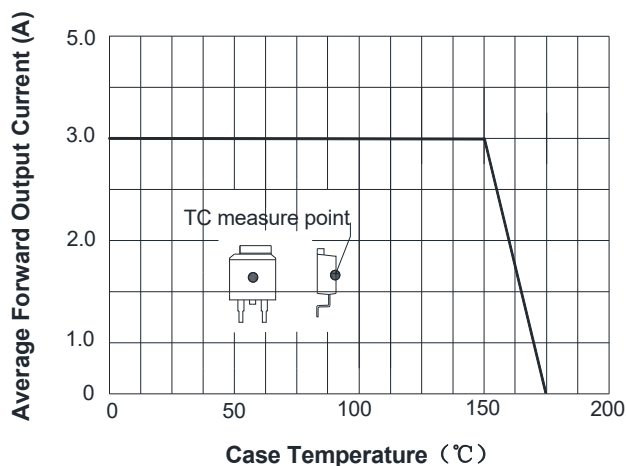


FIG2: Surge Forward Current Capability

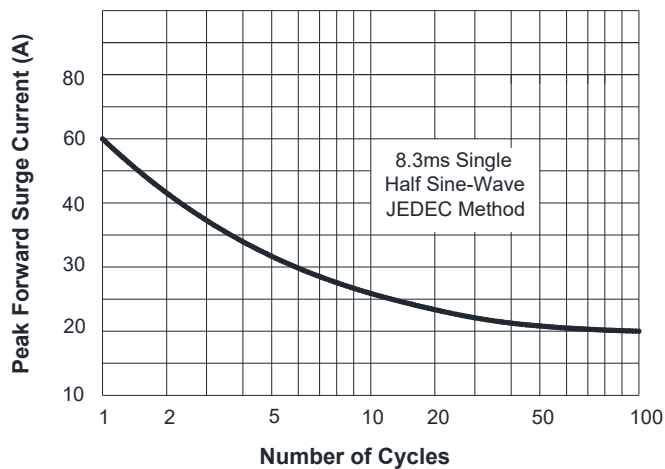


FIG3: Forward Voltage

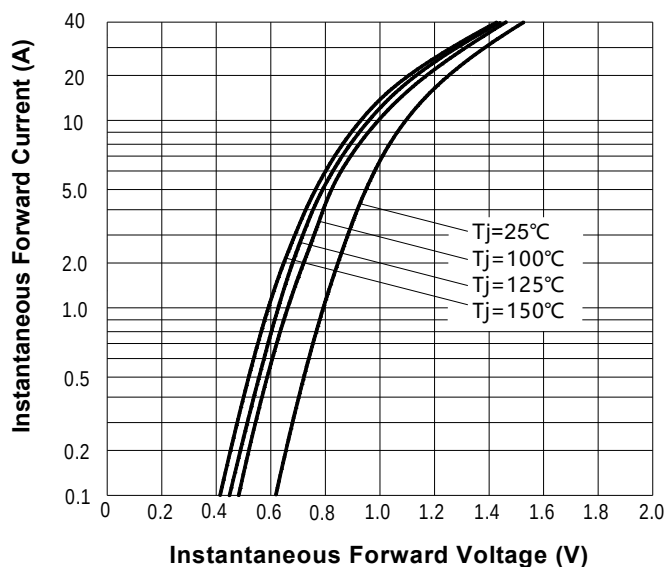


FIG.4: Instantaneous Reverse Characteristics

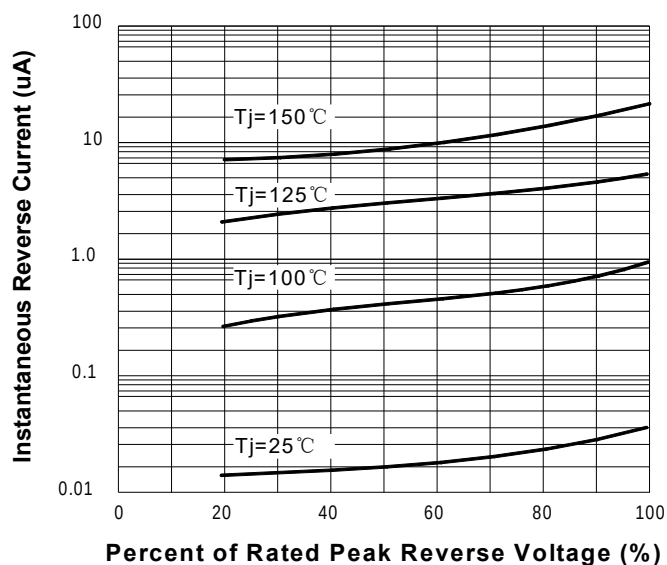
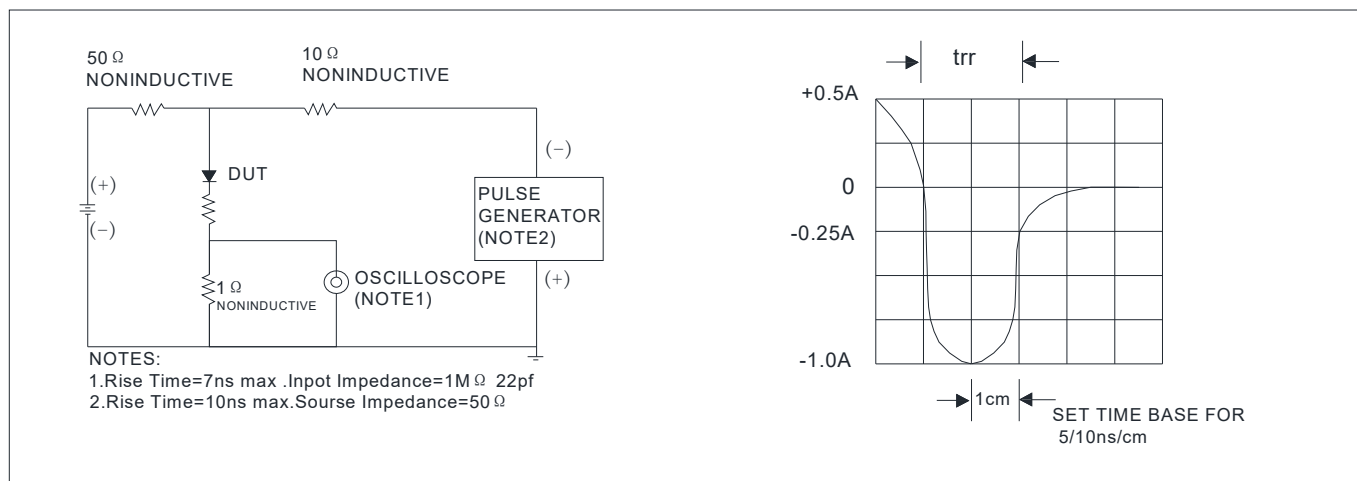
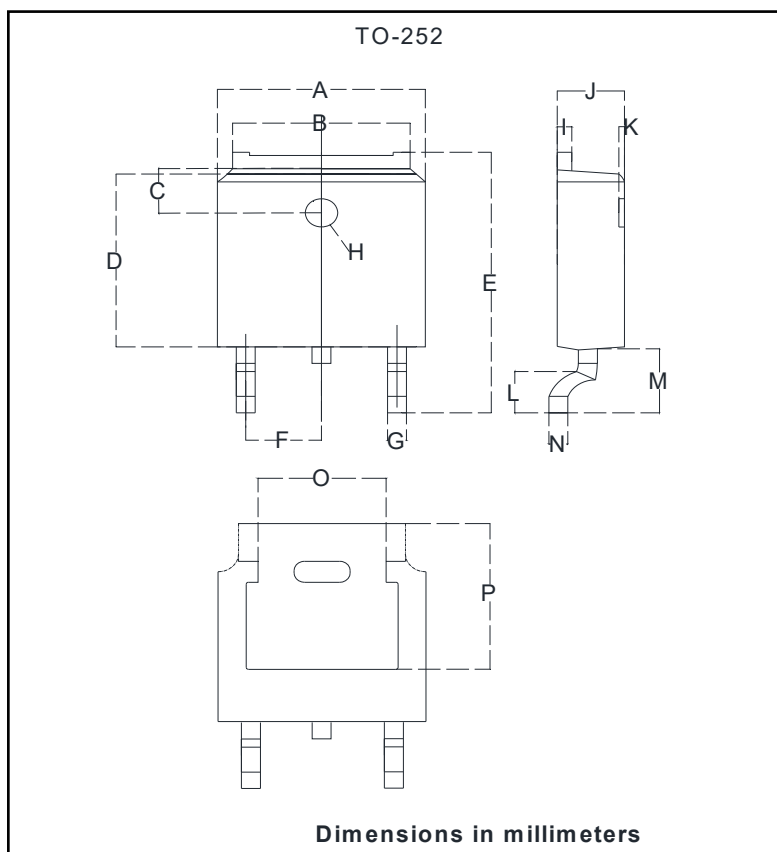


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

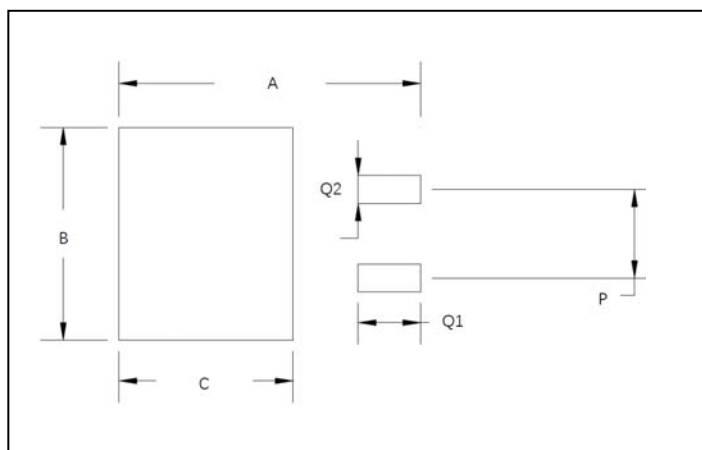


■ Outline Dimensions

MUR320D


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	Φ 1.050	Φ 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
O	4.20	4.95
P	5.15	5.45

■ Suggested Pad Layout



Dim	Millimeters
A	11.4
B	6.74
C	6.23
P	4.56
Q1	2.28
Q2	1.52

Packge	Packing	Box Size L×W×H(mm)	Quatity(pcs/box)	Carton Size L×W×H(mm)	Quantity(pcs/carton)
TO-252	2500pcs/Tape&Reel	340×336×29	2500	353×346×365	25000