

MUR320R-HAF

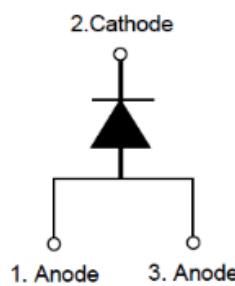
Ultrafast Recovery Rectifier

Reverse Voltage - 200 V

Forward Current - 3 A

Features

- Low forward voltage drop
- Low leakage
- Halogen and Antimony Free(HAF), RoHS compliant



TO-252 Plastic Package
1. Anode 2. Cathode 3. Anode

Maximum Ratings and Electrical Characteristics

Ratings at 25°C operating temperature range applies unless otherwise specified.

Parameter	Symbols	Value	Units
Recurrent Peak Reverse Voltage	V_{RRM}	200	V
Maximum Peak Reverse Voltage	V_{RWM}	200	V
DC Blocking Voltage	V_R	200	V
Average Forward Rectified Current ($T_C = 125^\circ C$)	$I_{F(AV)}$	3	A
Peak Forward Surge Current 8.3 ms Single Half-sine-wave Superimposed on Rated Load	I_{FSM}	75	A
Operating Junction Temperature Range	T_j	- 65 to + 150	°C
Storage Temperature Range	T_{stg}	- 65 to + 150	°C

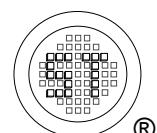
Thermal Characteristics

Parameter	Symbol	Value	Unit
Typical Thermal Resistance-Junction to Ambient ¹⁾	$R_{\theta JA}$	80	°C/W
Typical Thermal Resistance-Junction to Case	$R_{\theta JC}$	4	°C/W

¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Characteristics at $T_a = 25^\circ C$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 50 \mu A$	$V_{(BR)R}$	200	-	v
Forward Voltage at $I_F = 3 A$ at $I_F = 3 A, T_j = 125^\circ C$	V_F	- -	950 750	mV
Reverse Current at $V_R = 200 V$ at $V_R = 200 V, T_j = 125^\circ C$	I_R	- -	5 500	μA
Reverse Recovery Time at $I_F = 1 A, V_R = 30 V, dI/dt = 50 A/\mu s$ at $I_F = 0.5 A, V_R = 30 V, I_R = 1 A, I_{REC} = 0.25 A$	t_{rr}	- -	35 25	ns



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Electrical Characteristic Curves

Fig 1. Reverse Characteristic Curve

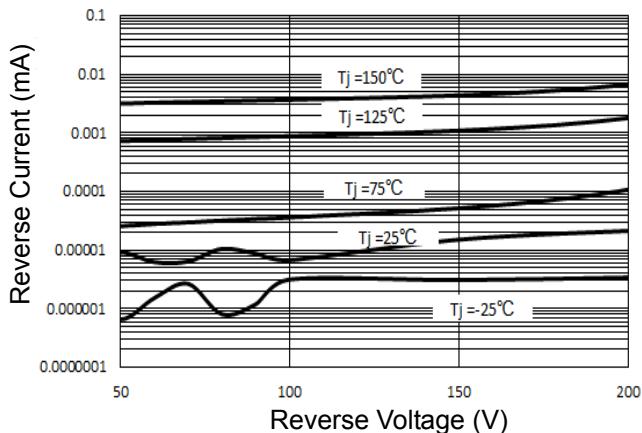


Fig 2. Forward Characteristic Curve

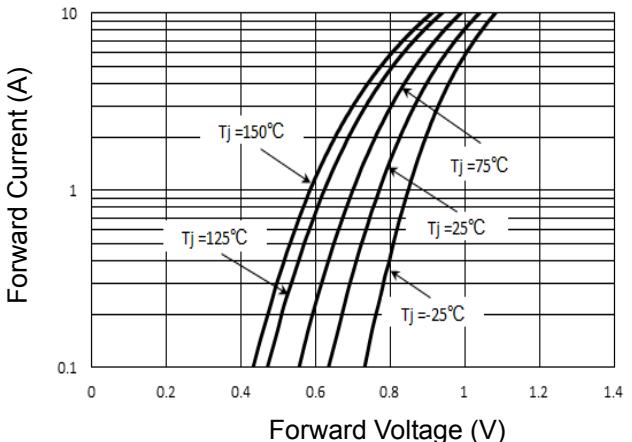


Fig 3. Junction Capacitance Curve

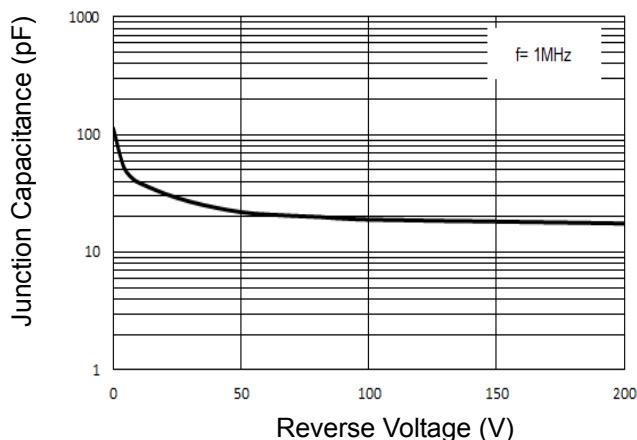


Fig 4. Average Rectified Current Derating Curve

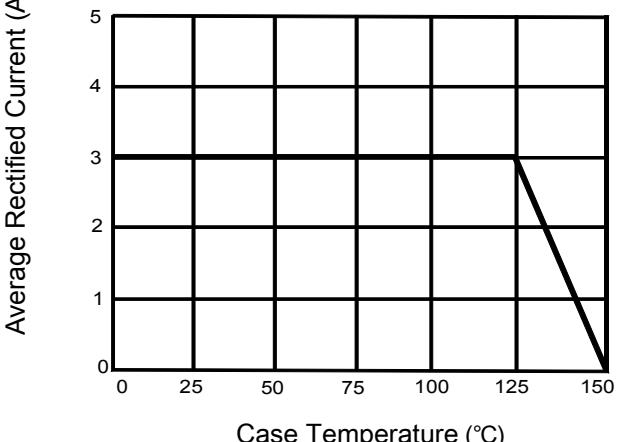
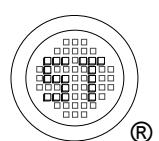
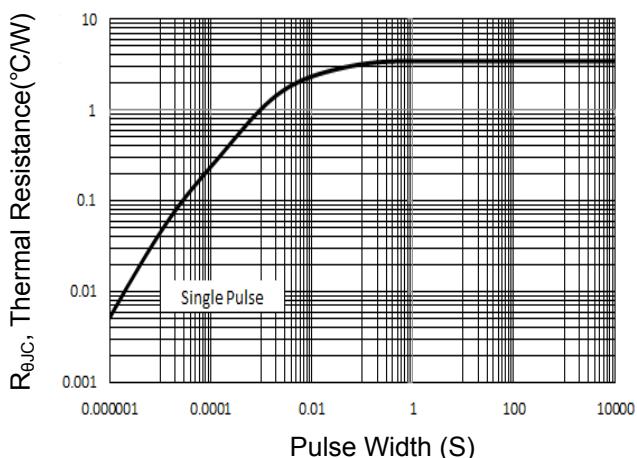


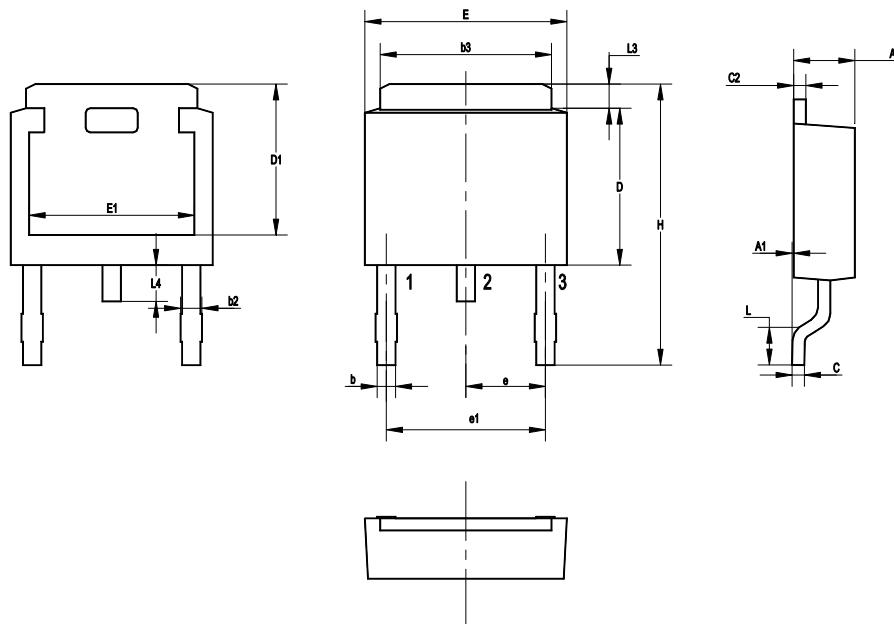
Fig. 5 Thermal Resistance Curve



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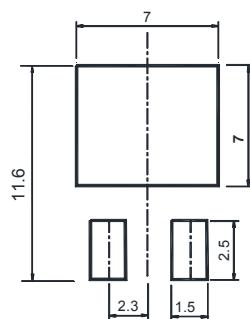
Package Outline (Dimensions in mm)

TO-252



UNIT	A	A1	b	b2	b3	C	C2	D	D1	E	E1	e	e1	H	L	L3	L4
mm	2.5	0.15	1.0	1.15	5.5	0.65	0.65	6.2	5.4	6.7	5.0	2.30	4.60	10.7	1.78	1.20	1.10
	2.1	0	0.5	0.65	4.9	0.4	0.4	5.6	5.0	6.1	4.6	TYP.	TYP.	9	1.40	0.85	0.51

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
TO-252	16	8 ± 0.1	0.315 ± 0.004	330	13	2,500

Marking information

" MUR320R " = Part No.

" ***** " = Date Code Marking

Font type: Arial

