



1. Features

- Adopt FRED chip.
- High frequency operation.
- High current capability.
- High reliability.
- Ultrafast recovery time,high voltage.
- RoHS Compliant.

2. Mechanical Data

- Case:Molded Plastic,TO247-2L .
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750,Method-2026.
- Marking:marked on body.
- Mounting Position : Any.

3. Maximum Ratings and Electrical Characteristics

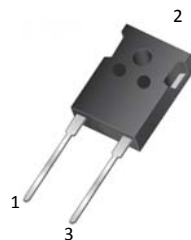
Rating at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	MURJ30S120	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1200	V
Maximum RMS Voltage	V_{RMS}	840	V
Maximum DC Blocking Voltage	V_{DC}	1200	V
Average Rectified Output Current @ $T_c=110^{\circ}\text{C}$	$I_{F(AV)}$	30.0	A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed @ $T_j=25^{\circ}\text{C}$ on rated load (JEDEC Method)	I_{FSM}	350	A
I^2t Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	508.38	A^2s
Typical Thermal Resistance	$R_{\theta JC}$	0.80	$^{\circ}\text{C}/\text{W}$
Operating Temperature and Storage Temperature Rang	T_j, T_{STG}	-55 to+175	$^{\circ}\text{C}$

Electrical Characteristics.

PARAMETER		SYMBOL	Min.	Typ.	Max.	UNIT
Forward Voltage	$I_F=30\text{A}, T_j=25^{\circ}\text{C}$	V_{FM}	-	2.80	3.20	V
	$I_F=30\text{A}, T_j=125^{\circ}\text{C}$		-	2.60	-	
Reverse current	$V_R=1200\text{V}, T_j=25^{\circ}\text{C}$	I_R	-	-	5.0	μA
	$V_R=1200\text{V}, T_j=125^{\circ}\text{C}$		-	-	200.0	
Reverse Recovery Time	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{RR}=0.25\text{A}, T_j=25^{\circ}\text{C}$	T_{RR}	-	-	60.0	ns
	$I_F=1\text{A}, V_R=30\text{V}, dI_F/dt=200\text{A}/\mu\text{s}, T_j=25^{\circ}\text{C}$		-	28.0	-	
	$I_F=30\text{A}, V_R=400\text{V}, dI_F/dt=200\text{A}/\mu\text{s}, T_j=25^{\circ}\text{C}$		-	90.0	-	
	$I_F=30\text{A}, V_R=400\text{V}, dI_F/dt=200\text{A}/\mu\text{s}, T_j=125^{\circ}\text{C}$		-	215.0	-	
Reverse recovery current	$I_F=30\text{A}, V_R=400\text{V}, dI_F/dt=200\text{A}/\mu\text{s}, T_j=25^{\circ}\text{C}$	I_{RRM}	-	5.2	-	A
	$I_F=30\text{A}, V_R=400\text{V}, dI_F/dt=200\text{A}/\mu\text{s}, T_j=125^{\circ}\text{C}$		-	14.0	-	
Reverse recovery charge	$I_F=30\text{A}, V_R=400\text{V}, dI_F/dt=200\text{A}/\mu\text{s}, T_j=25^{\circ}\text{C}$	Q_{RR}	-	285.0	-	nC
	$I_F=30\text{A}, V_R=400\text{V}, dI_F/dt=200\text{A}/\mu\text{s}, T_j=125^{\circ}\text{C}$		-	1780.0	-	

TO247-2L





4. Rating And Characteristic Curves

Fig. 1 Forward Current Derating Curve

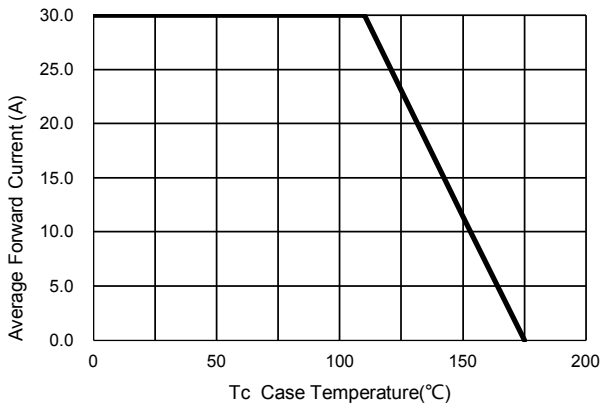


Fig. 2 Typical Forward Characteristics

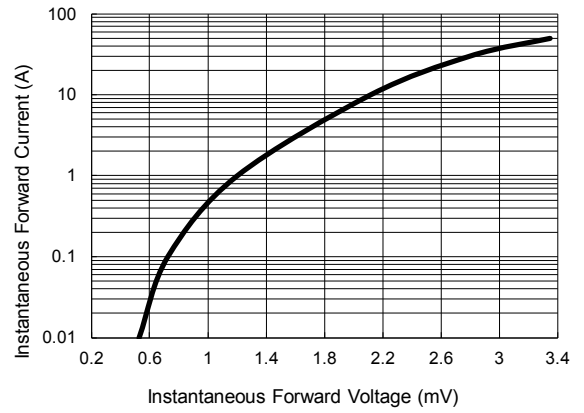


Fig. 3 Forward Surge Current Capability

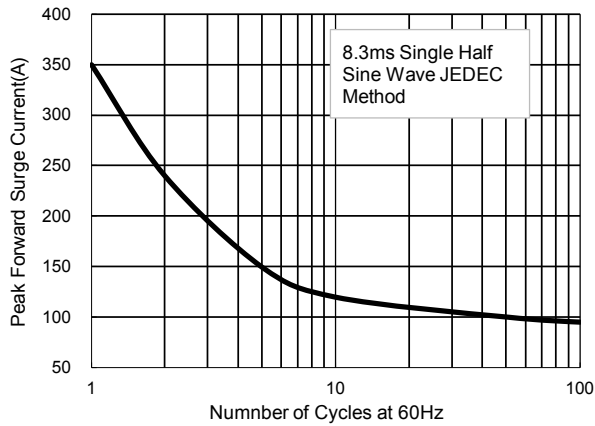


Fig.4 Typical Reverse Characteristics

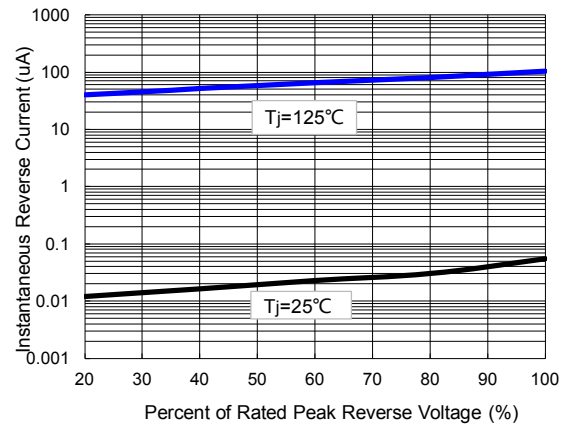
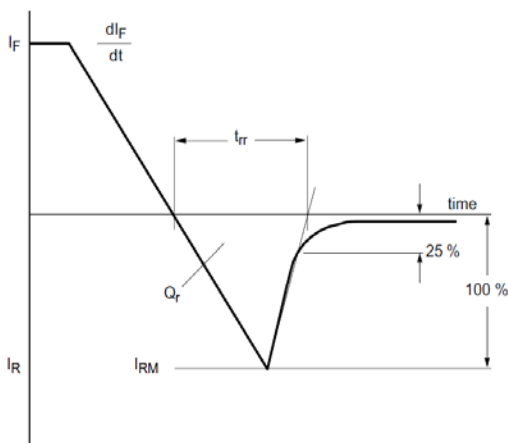
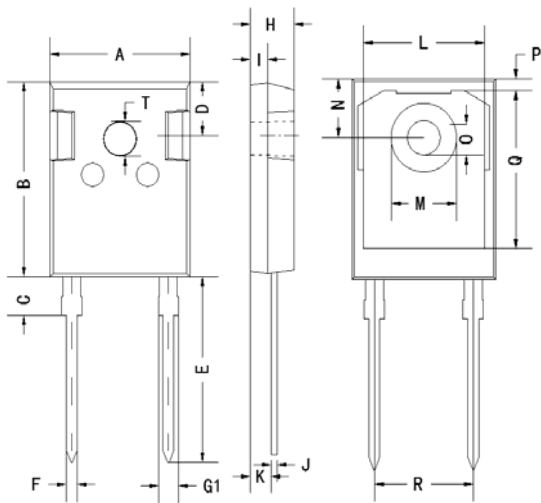


Fig. 5 Reverse recovery definitions; ramp recovery



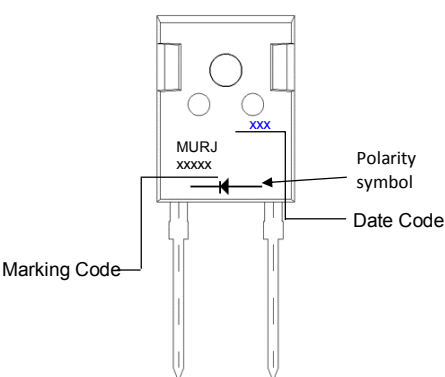
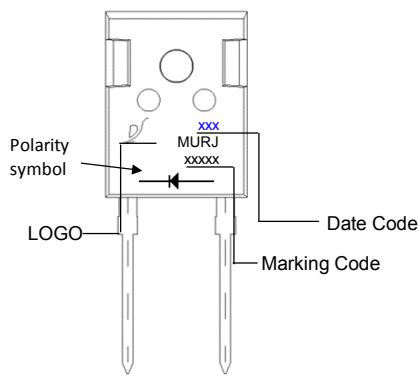


5. Dimensions



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.614	0.630	15.60	16.00
B	0.819	0.835	20.80	21.20
C	0.155	0.170	3.93	4.33
D	0.220	0.236	5.60	6.00
E	0.776	0.792	19.72	20.12
F	0.046	0.050	1.16	1.26
G		0.089		2.25
H	0.193	0.201	4.90	5.10
I	0.075	0.083	1.90	2.10
J	0.021	0.029	0.53	0.725
K	0.091	0.099	2.31	2.51
L	0.516	0.531	13.10	13.50
M	0.276	0.291	7.00	7.40
N	0.238	0.246	6.05	6.25
O	0.14	0.15	3.55	3.75
P	0.04	0.05	1.05	1.35
Q	0.64	0.66	16.25	16.85
R	0.42	0.44	10.68	11.08
T	0.14	0.15	3.65	3.85

6. Part Marking System



7. Package Information

Package	Packing Type	Tube Size	Quantity(pcs)
		mm	
TO247-2L	Tube	416*45.3*7.5	25



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