

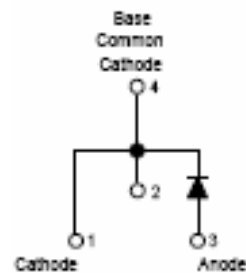
MURD330 ULTRAFAST PLASTIC RECTIFIER

Applications:

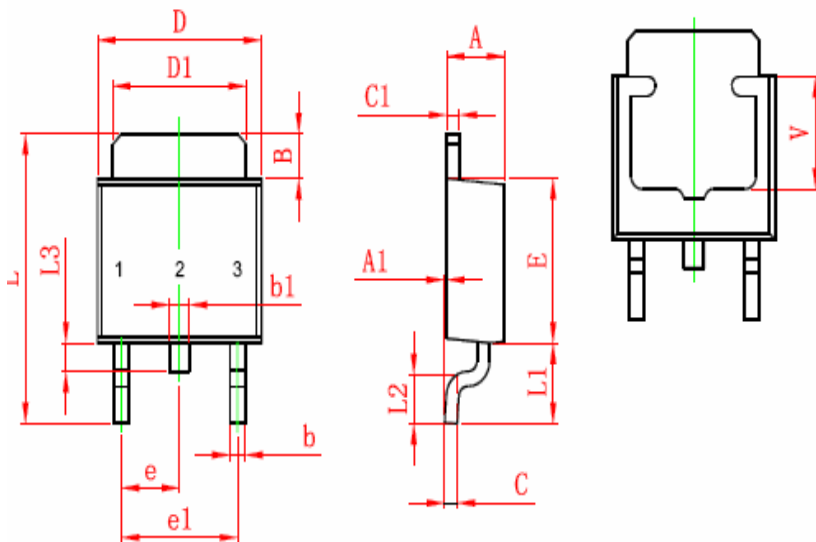
- Switching Power Supply
- Power Switching Circuits
- General Purpose

Features:

- Ultra-Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-0
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

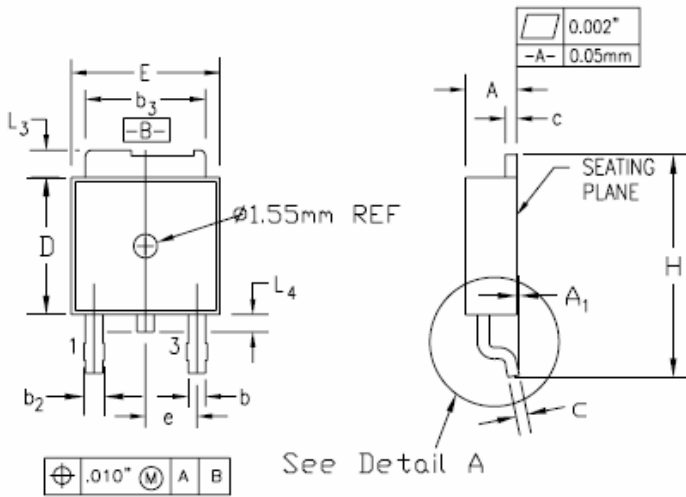


Mechanical Dimensions (In mm):

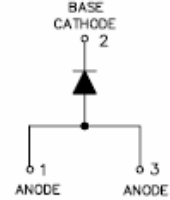
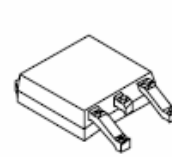
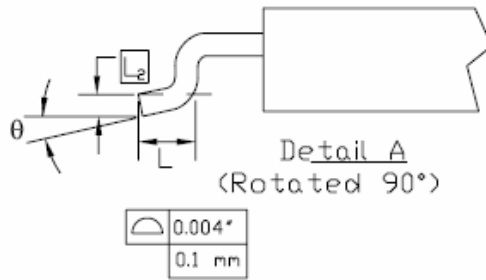
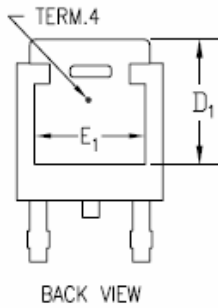


Symbol	Dimensions In Millimeters	
	Min.	Max.
A	2.200	2.400
A1	0.000	0.127
B	1.350	1.650
b	0.500	0.700
b1	0.700	0.900
c	0.430	0.580
c1	0.430	0.580
D	6.350	6.650
D1	5.200	5.400
E	5.400	5.700
e	2.300 TYP.	
e1	4.500	4.700
L	9.500	9.900
L1	2.550	2.900
L2	1.400	1.780
L3	0.600	0.900
V	3.800 REF.	

OPTION 1

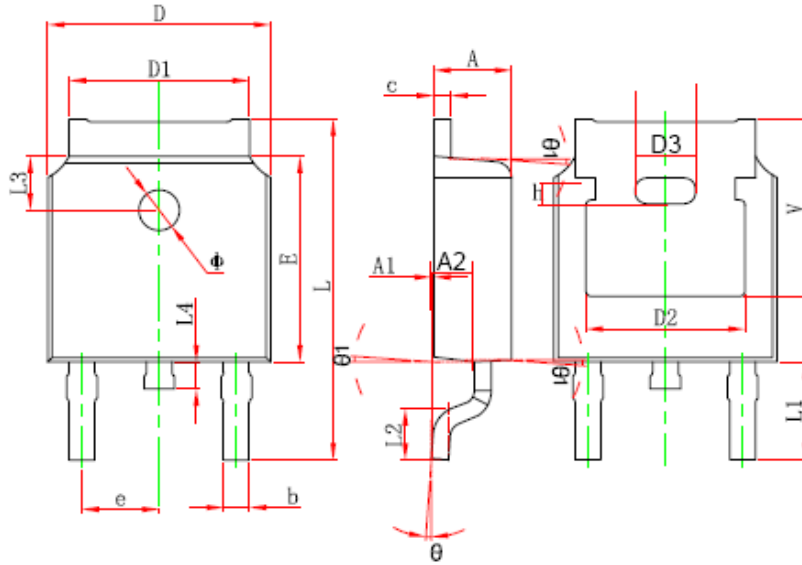


See Detail A

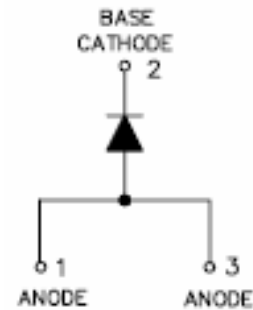


SYMBOL	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
A	0.086	0.094	2.19	2.38
A ₁	—	0.005	—	0.13
b	0.025	0.035	0.64	0.89
b ₂	0.033	0.045	0.84	1.14
b ₃	0.205	0.215	5.21	5.46
c	0.018	0.024	0.46	0.61
D	0.235	0.245	5.97	6.22
D ₁	0.205	—	5.21	—
E	0.250	0.265	6.35	6.73
E ₁	0.190	—	4.83	—
e	0.090 BSC		2.29 BSC	
H	0.380	0.410	9.65	10.41
L	0.055	0.070	1.40	1.78
L ₂	0.020 BSC		0.51 BSC	
L ₃	0.035	0.050	0.89	1.27
L ₄	0.025	0.040	0.64	1.01
θ	0°	8°	0°	8°

OPTION 2



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.380	0.087	0.094
A1	0.000	0.100	0.000	0.004
b	0.710	0.810	0.028	0.032
c	0.460	0.560	0.018	0.022
D	6.500	6.700	0.256	0.264
D1	5.130	5.460	0.202	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.800	10.400	0.386	0.409
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
Φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
A2	0.910	1.110	0.036	0.044
V	5.350 REF.		0.211 REF.	
D3	1.778 REF.		0.070 REF.	
h	0.762 REF.		0.030 REF.	
θ1	7°		7°	



OPTION 3

DPAK



Technical Data
Data Sheet N0332, Rev. -

Green Products

Marking Diagram:



Where XXXXX is YYWWL

MUR = Device Type
D = Package type
3 = Forward Current (3A)
30 = Reverse Voltage (300V)
SSG = SSG
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Ordering Information:

Device	Package	Shipping
MURD330	DPAK (Pb-Free)	2500 pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.



Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	MURD330	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	300	V
Average Rectified Output Current @ $T_L = 75^\circ\text{C}$	I_o	3.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	75	A
Forward Voltage @ $I_F = 3.0\text{A}$, $T_J=25^\circ\text{C}$	V_{FM1}	1.25	V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_{RM}	5.0 200	μA
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	80	K/W
Maximum Reverse Recovery Time (Note 2)	T_{rr}	35	ns
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$
Approximate Weight	wt	0.39	g
Case Style	DPAK		

Note: 1. Mounted on P.C. Board with 14mm^2 (0.13mm thick) copper pad.
2. Measured with $I_F=0.5\text{A}$; $I_R=1.0\text{A}$; $I_{RR}=0.25\text{A}$.

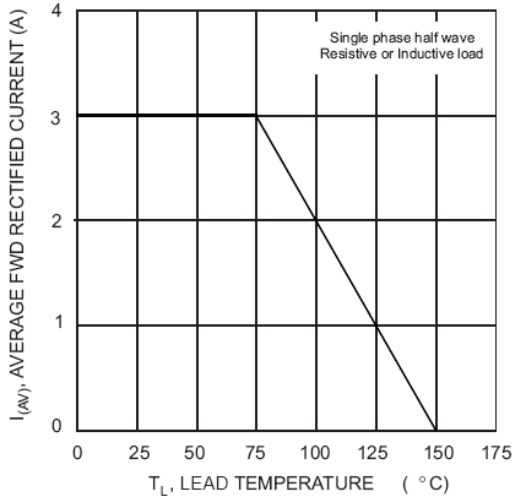


Fig. 1 Forward Current Derating Curve

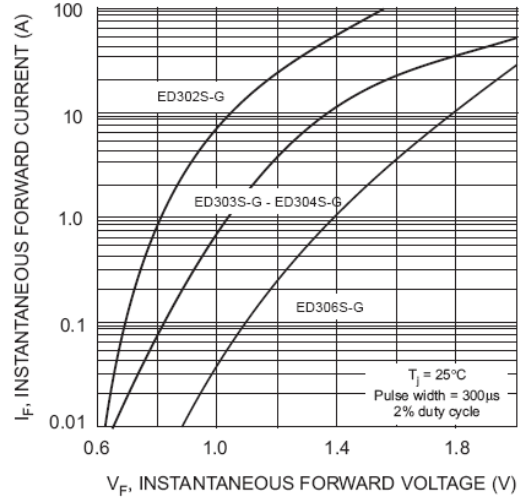


Fig. 2 Typical Forward Characteristics

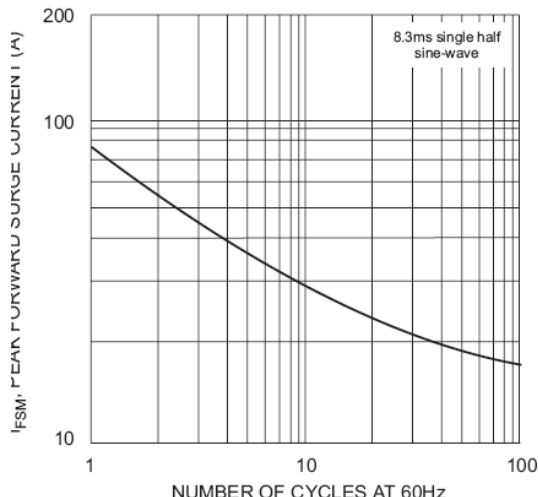


Fig. 3 Peak Forward Surge Current

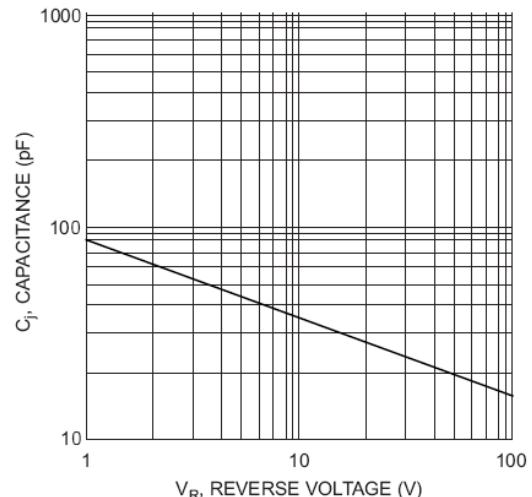
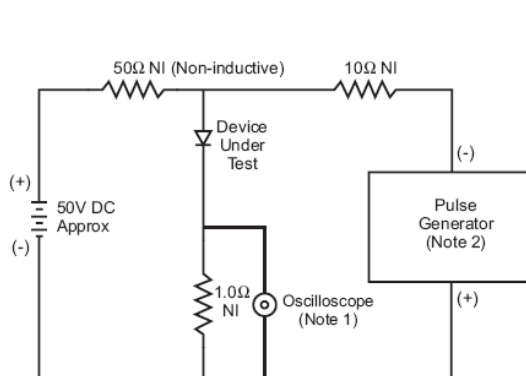


Fig. 4 Typical Junction Capacitance



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0M Ω , 22pF.
2. Rise Time = 10ns max. Input Impedance = 50 Ω .

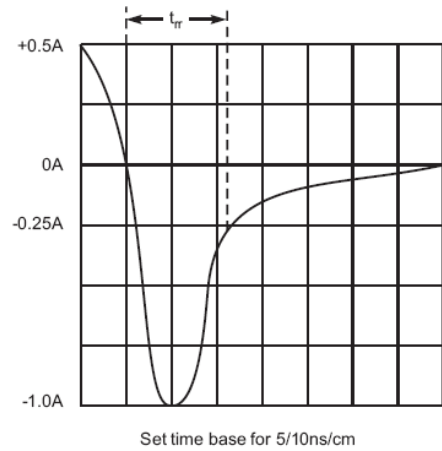


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

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