



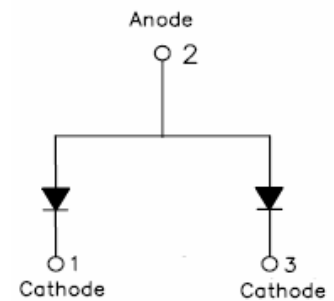
## MURD1030CTR ULTRAFAST PLASTIC RECTIFIER

### Applications:

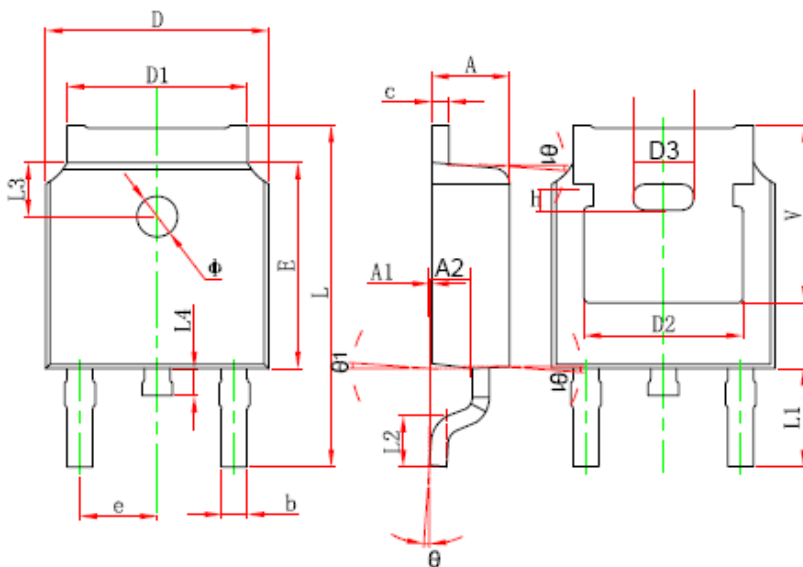
- Switching Power Supply
- Power Switching Circuits
- General Purpose

### 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/Inches):



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°	

### DPAK

**Marking Diagram:**



Where XXXXX is YYWWL

MUR = Device Type  
 D = Package type  
 10 = Forward Current (10A)  
 30 = Reverse Voltage (300V)  
 CTR = Configuration  
 SSG = SSG  
 YY = Year  
 WW = Week  
 L = Lot Number

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

**Ordering Information:**

Device	Package	Shipping
MURD1030CTR	DPAK (Pb-Free)	2500pcs/ 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:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	300	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @Tc=100°C, rectangular wave form	10	A
Peak One Cycle Non-Repetitive Surge Current (Per leg)	$I_{FSM}$	50Hz, Half Sine wave	150	A

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop (Per leg)*	$V_{F1}$	@ $I_F=5A$ , Pulse, $T_J = 25^\circ C$	1.3	V
Reverse Current (Per leg)*	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ C$	10	$\mu A$
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 100^\circ C$	400	$\mu A$
Reverse Recovery Time (Per leg)*	$t_{rr}$	$I_F=500mA$ , $I_R=1A$ , and $I_{rm}=250mA$	50	ns

\* Pulse width < 300  $\mu s$ , duty cycle < 2%

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +150	$^\circ C$
Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ C$
Maximum Thermal Resistance Junction to Case (Per Leg)	$R_{\theta JC}$	DC operation	1.5	$^\circ C/W$
Approximate Weight	wt	-	0.39	g
Case Style	DPAK			

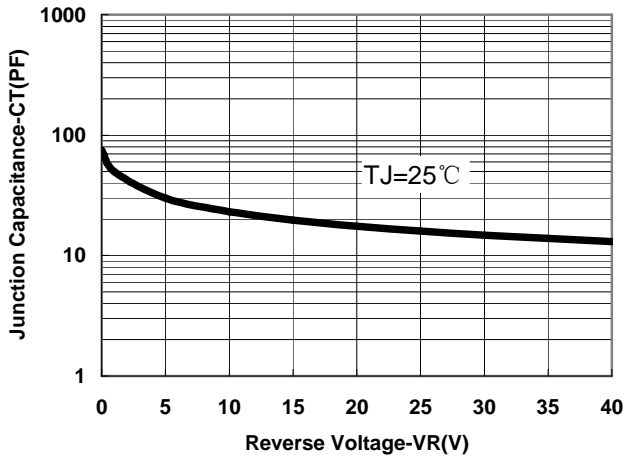


Fig.1-Typical Junction Capacitance

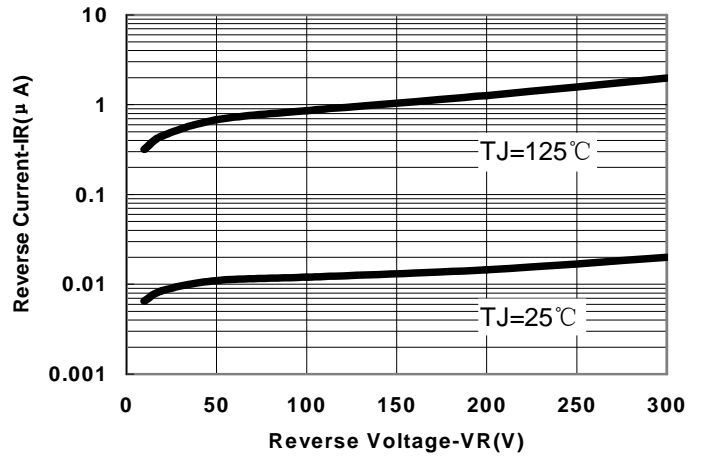


Fig.2-Typical Reverse Characteristics

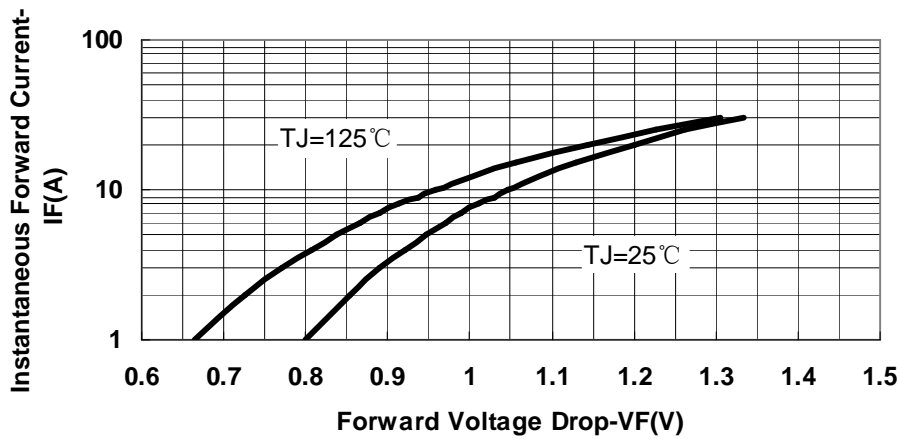


Fig.3-Typical Instantaneous Forward Characteristics

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