SDURD320

Technical Data *Green Products*
Data Sheet N1784, Rev. -

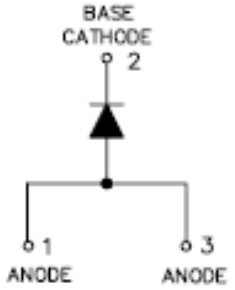
SDURD320 ULTRAFAST PLASTIC RECTIFIER

Applications:

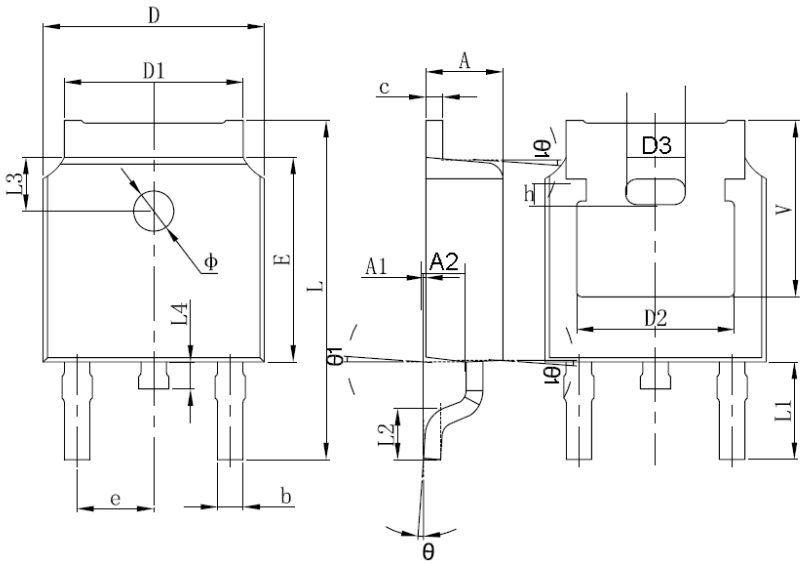
- **Switching Power Supply**
- **Power Switching Circuits**
- **General Purpose**

Features:

- **Ultra-Fast Switching**
- **High Current Capability**
- **Low Reverse Leakage Current**
- **High Surge Current Capability**
- **Plastic Material has UL Flammability Classification 94V-O**
- **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	1.778REF.		0.070REF.	
h	0.762REF.		0.030REF.	
θ1	7°		7°	

DPAK

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Marking Diagram:



Where XXXXX is YYWWL

SDUR	= Device Type
D	= Package type
3	= Forward Current (3A)
20	= Reverse Voltage (200V)
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

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

Ordering Information:

Device	Package	Shipping
SDURD320	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.

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Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	200	V
Average Forward Current	$Io_{(AV)}$	50% duty cycle @Tc=90°C, rectangular wave form	3	A
Peak One Cycle Non-Repetitive Surge Current (Per leg)	I_{FSM}	8.3ms, Half Sine pulse	80	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop (Per leg)*	V_F	@ I_F=3A, Pulse, T_J = 25℃	1.2	V
Reverse Current (Per leg)*	I_{R1}	@V_R = rated V_R T_J = 25℃	5	μA
	I_{R2}	@V_R = rated V_R T_J = 125℃	500	μA
Reverse Recovery Time (Per leg)*	t_{rr}	I_F=500mA, I_R=1A,and I_{rm}=250mA	35	ns

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	℃
Storage Temperature	T_{stg}	-	-55 to +150	℃
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	3.5	℃/W
Approximate Weight	wt	-	0.39	g
Case Style	DPAK			

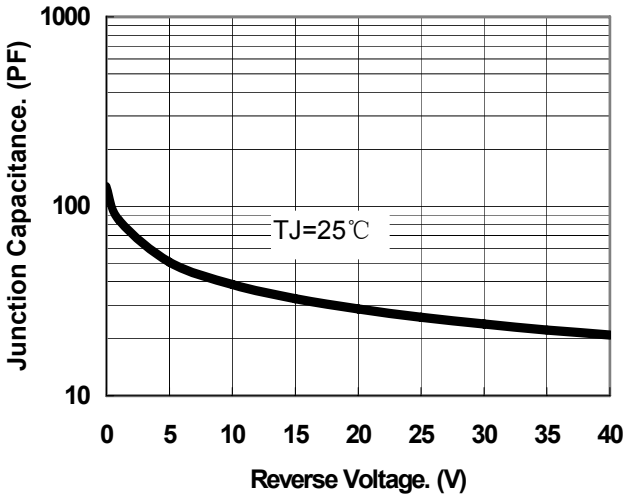


Fig.1-Typical Junction Capacitance

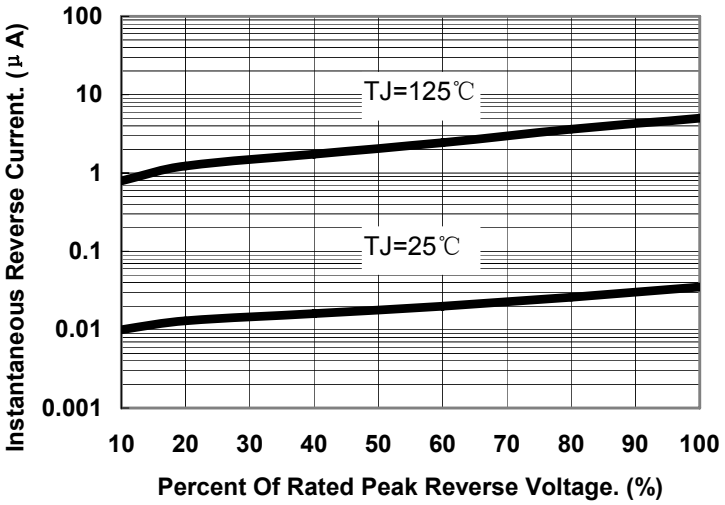


Fig.2-Typical Reverse Characteristics

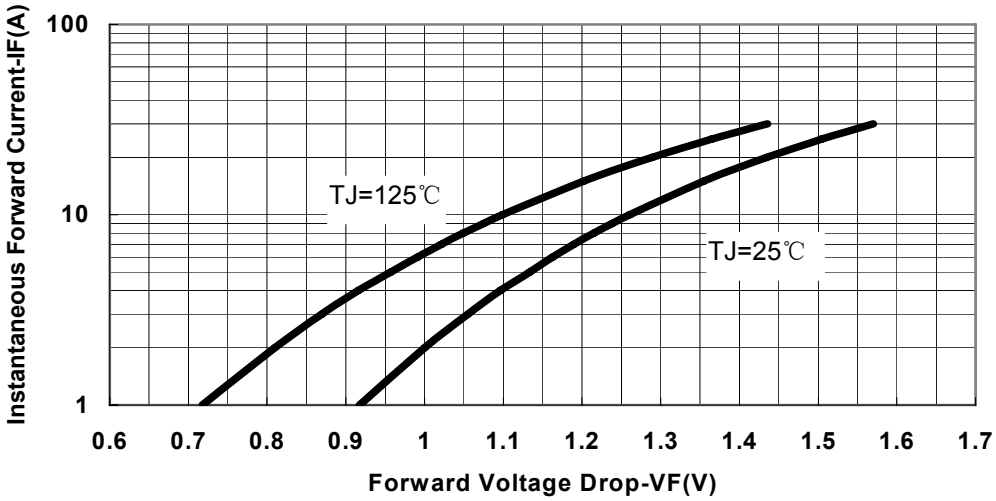


Fig.3-Typical Instantaneous Forward Voltage Characteristics

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