



MOS Controlled Diode

PRODUCT SUMMARY

V _{RRM}	I _O	V _F (MAX) @ 25°C	I _R (MAX) @ 25°C
60V	20A	0.48V	0.5mA

FEATURES

- Low Profile Design for Smart Phone Charger
- Ideal for SMT Mounting
- Low forward voltage drop
- High forward surge capability
- Excellent High Temperature Stability



ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{RRM}	Peak Repetitive Reverse Voltage	60	V
V _{RWM}	Working Peak Reverse Voltage	60	V
V _{RM}	DC Blocking Voltage	60	V
V _{R(RMS)}	RMS Reverse Voltage	42	V
I _O	Average Rectified Output Current	20	A
I _{FSM}	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	300	A
E _{AS}	Non-Repetitive Avalanche Energy (T _J = 25°C, I _{AS} = 15, L = 5mH)	400	mJ
P _{ARM}	Repetitive Peak Avalanche Energy	36000	W

THERMAL CHARACTERISTICS

Symbol	Parameter	Value	Unit
R _{θJA}	Thermal Resistance, Junction-to-Ambient	12	°C/W
T _J	Operating Temperature Range	-55 to 150	°C
T _{STG}	Storage Temperature Range	-55 to 175	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _F	Forward Voltage Drop	I _F = 15A, T _J = 25°C		0.41	0.44	V
		I _F = 20A, T _J = 25°C		0.45	0.48	V
		I _F = 20A, T _J = 125°C		0.44	0.47	V
I _R	Leakage Current	V _R = 60V, T _J = 25°C		200	500	uA
		V _R = 60V, T _J = 125°C			100	mA
C _T	Total Capacitance	V _R = 60V, f = 1MHz		340		pF

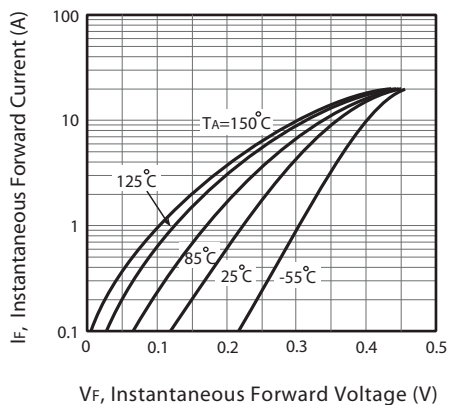


Figure 1. Typical Forward Characteristics

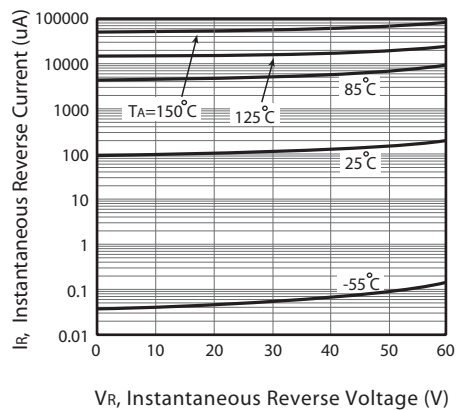


Figure 2. Typical Reverse Characteristics

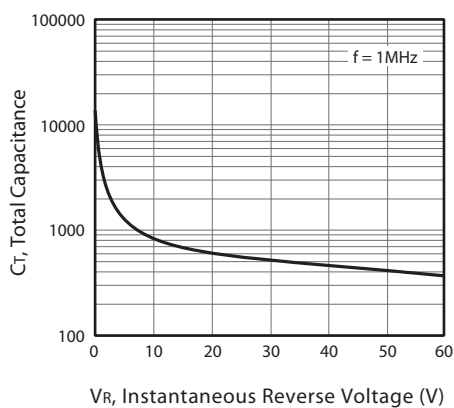


Figure 3. Total Capacitance vs. Reverse Voltage

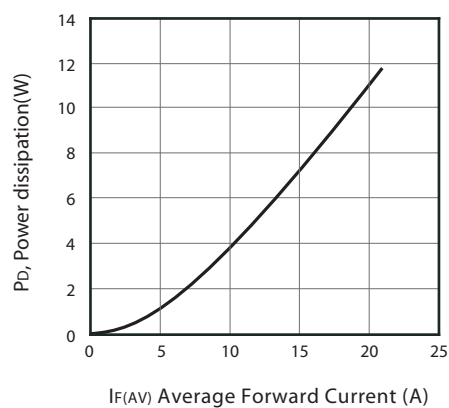


Figure 4. Forward Power Dissipation

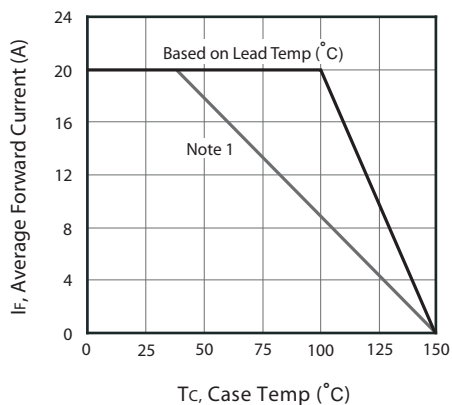


Figure 5. Forward Current Derating Curve

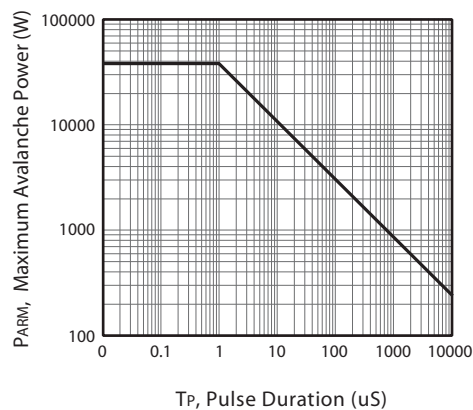


Figure 6. Maximum Avalanche Power Curve

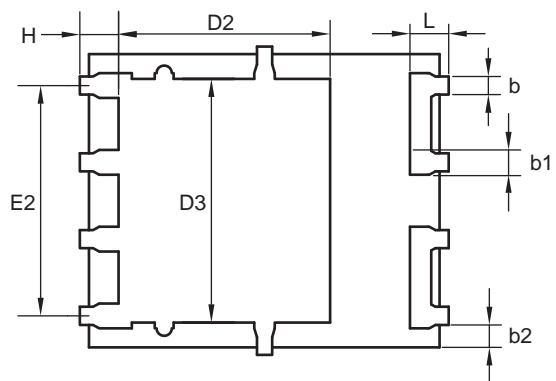
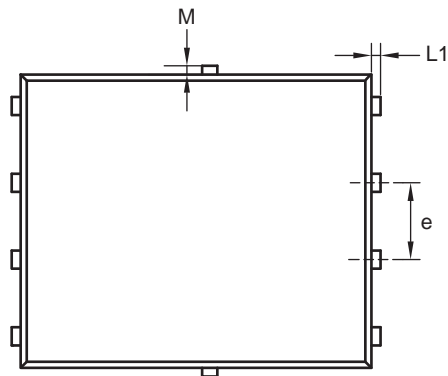
Note : 1.Device mounted on FR-4 substrate, 2oz copper.

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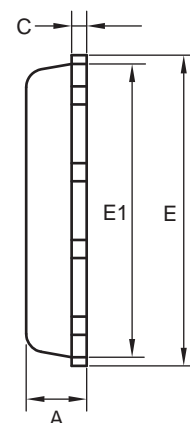
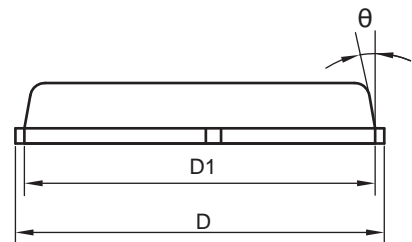
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PACKAGE OUTLINE DIMENSIONS

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SYMBOLS	MILLIMETERS		
	MIN.	NOM.	MAX.
A	0.90	1.00	1.10
b	0.20	0.30	0.40
b1	0.31	0.41	0.51
b2	0.25	0.35	0.45
C	0.15	0.25	0.35
D	5.90	6.10	6.30
D1	5.60	5.80	6.00
D2	3.50 REF.		
D3	4.00 REF.		
E	5.00	5.20	5.40
E1	4.70	4.90	5.10
E2	3.71	3.81	3.91
e	1.17	1.27	1.37
H	0.63 REF.		
L	0.53	0.63	0.73
L1	0.05	0.15	0.25
M	0.05	0.15	0.25
θ	8°	10°	12°



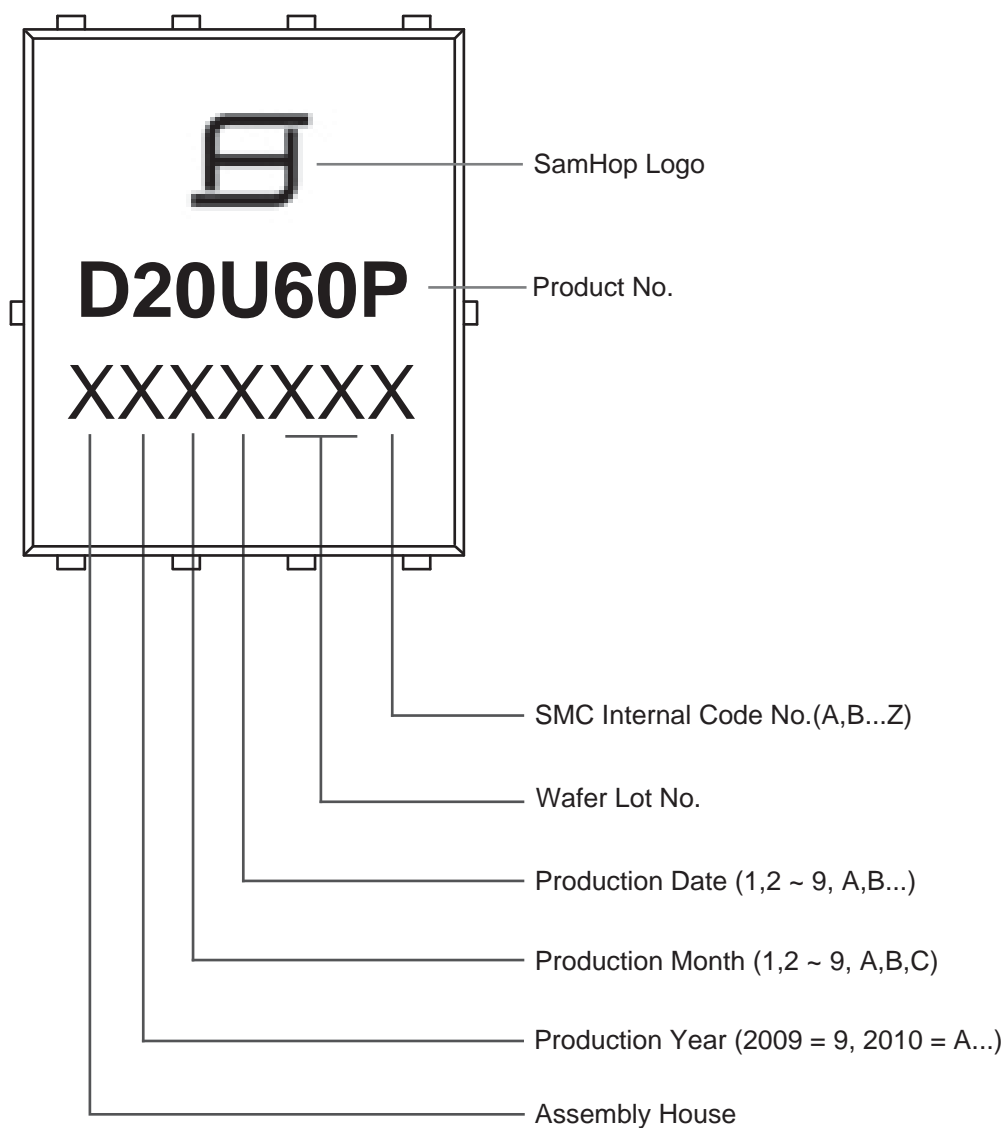
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TOP MARKING DEFINITION

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