



MOS Controlled Diode

PRODUCT SUMMARY

V _{RRM}	I _O	V _F (MAX) @ 25°C	I _R (MAX) @ 25°C
45V	5A	0.5V	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

DO-221



Top View



Bottom View



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

Symbol	Parameter	Value	Unit
V _{RRM}	Peak Repetitive Reverse Voltage	45	V
V _{RWM}	Working Peak Reverse Voltage	45	V
V _{RM}	DC Blocking Voltage	45	V
V _{R(RMS)}	RMS Reverse Voltage	32	V
I _O	Average Rectified Output Current	5	A
I _{FSM}	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	100	A
E _{AS}	Non-Repetitive Avalanche Energy (T _J = 25°C, I _{AS} = 10, L = 5mH)	160	mJ
P _{ARM}	Repetitive Peak Avalanche Energy	22000	W

THERMAL CHARACTERISTICS

Symbol	Parameter	Value	Unit
R _{θJA}	Thermal Resistance, Junction-to-Ambient	115	°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 = 3A, T _J = 25°C		0.40	0.45	V
		I _F = 5A, T _J = 25°C		0.45	0.50	V
		I _F = 5A, T _J = 125°C		0.43	0.49	V
I _R	Leakage Current	V _R = 45V, T _J = 25°C		40	500	uA
		V _R = 45V, T _J = 125°C			100	mA
C _T	Total Capacitance	V _R = 45V, f = 1MHz		100		pF

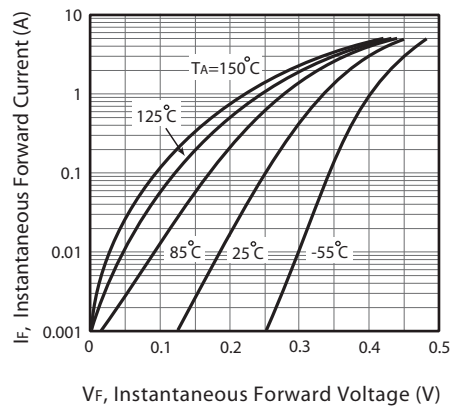


Figure 1. Typical Forward Characteristics

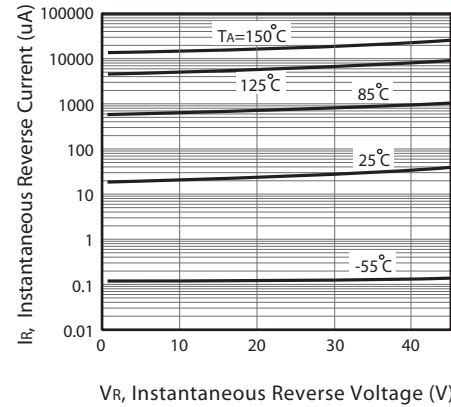


Figure 2. Typical Reverse Characteristics

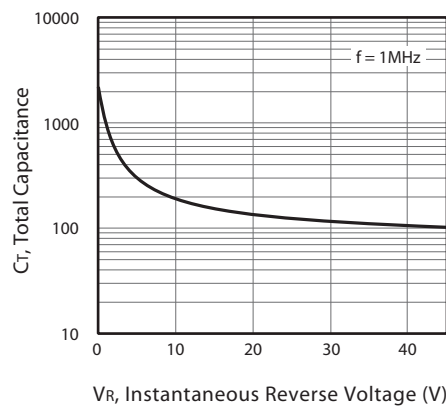


Figure 3. Total Capacitance vs. Reverse Voltage

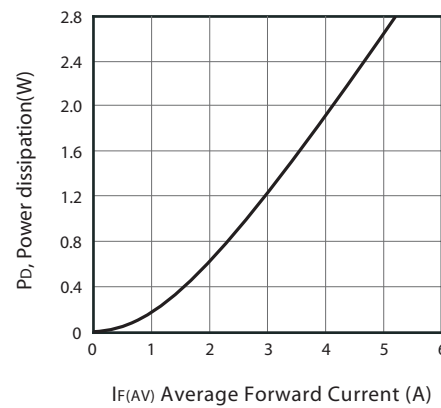


Figure 4. Forward Power Dissipation

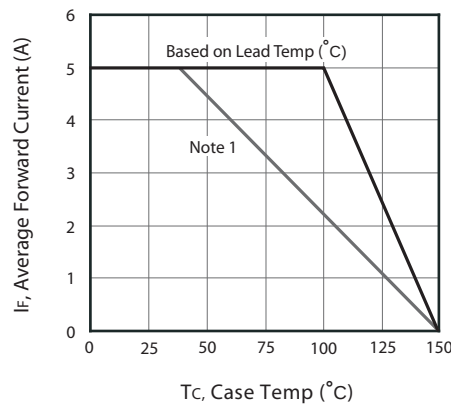


Figure 5. Forward Current Derating Curve

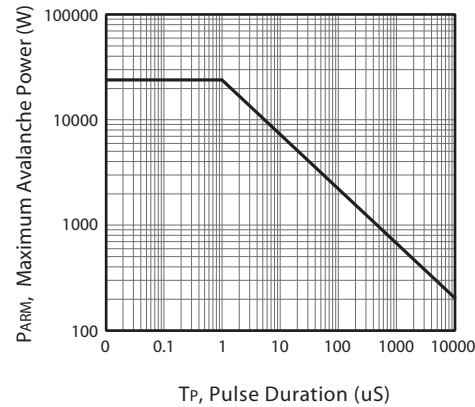


Figure 6. Maximum Avalanche Power Curve

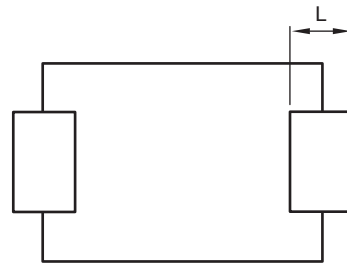
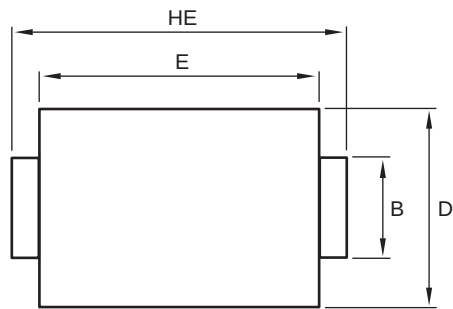
Note: 1. Device mounted on FR-4 substrate, 2oz copper, with 10cm x 10cm pad layout.

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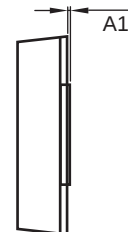
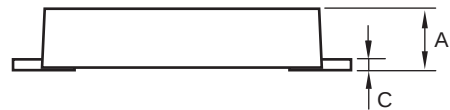
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PACKAGE OUTLINE DIMENSIONS

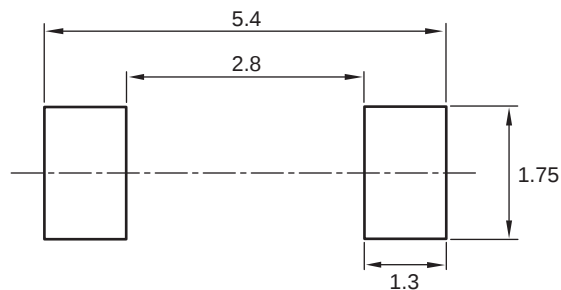
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SYMBOLS	MILLIMETERS		
	MIN.	NOM.	MAX.
A	0.900	0.955	1.010
B	1.250	1.350	1.450
C	0.100	0.175	0.250
D	2.600	2.700	2.800
HE	4.800	5.000	5.200
E	4.100	4.200	4.300
L	0.800	0.900	1.000
A1	0.000	0.050	0.100



Mounting Pad Layout (unit:mm)



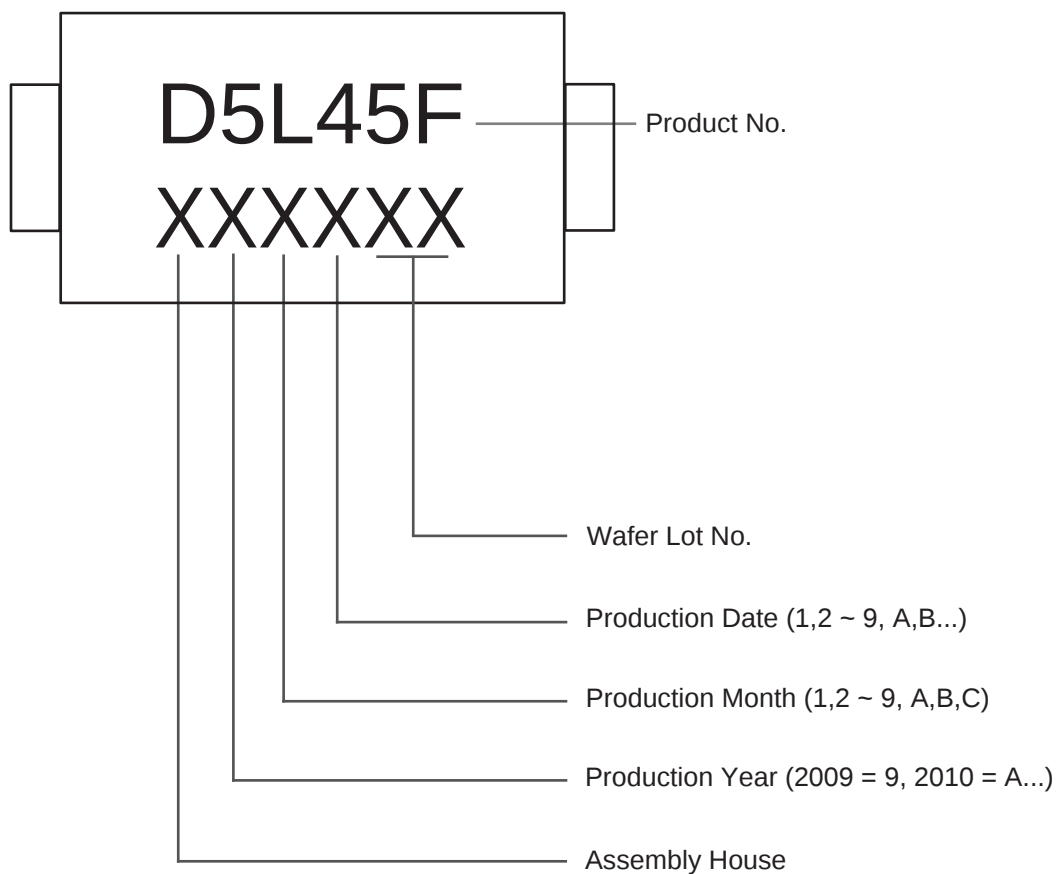
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TOP MARKING DEFINITION

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