SamHop Microelectronics Corp.

SMD3L50F

Ver 2.0

MOS Controlled Diode

PRODUCT SUMMARY			
V_{RRM}	I_O	$V_{F(MAX)}$ @ 25°C	$I_{R(MAX)}$ @ 25°C
50V	3A	0.51V	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

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Top View

Bottom View

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

Symbol	Parameter	Value	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	50	V
V_{RWM}	Working Peak Reverse Voltage	50	V
V_{RM}	DC Blocking Voltage	50	V
$V_{R(RMS)}$	RMS Reverse Voltage	35	V
I_O	Average Rectified Output Current	3	A
I_{FSM}	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	80	A
E_{AS}	Non-Repetitive Avalanche Energy (T_J= 25°C, I_{AS} = 8, L = 5mH)	110	mJ
P_{ARM}	Repetitive Peak Avalanche Energy	11000	W

THERMAL CHARACTERISTICS

Symbol	Parameter	Value	Unit
$R_{\theta JA}$	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 = 1A, T_J = 25°C		0.36	0.41	V
		I_F = 3A, T_J = 25°C		0.47	0.51	V
		I_F = 3A, T_J = 125°C		0.46	0.50	V
I_R	Leakage Current	V_R = 50V, T_J = 25°C		80	500	uA
		V_R = 50V, T_J = 125°C			100	mA
C_T	Total Capacitance	V_R = 50V, f = 1MHz		40		pF

Details are subject to change without notice.

Nov,10,2014

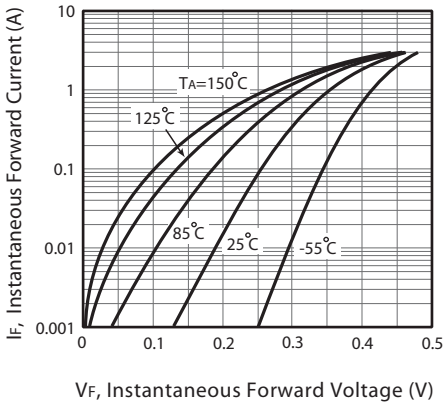

Figure 1. Typical Forward Characteristics

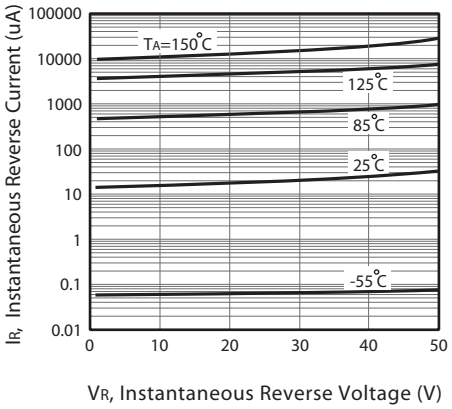

Figure 2. Typical Reverse Characteristics

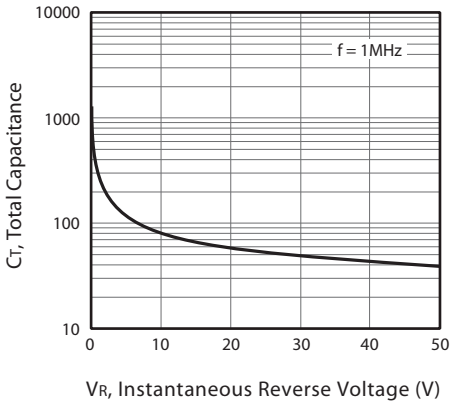

Figure 3. Total Capacitance vs. Reverse Voltage

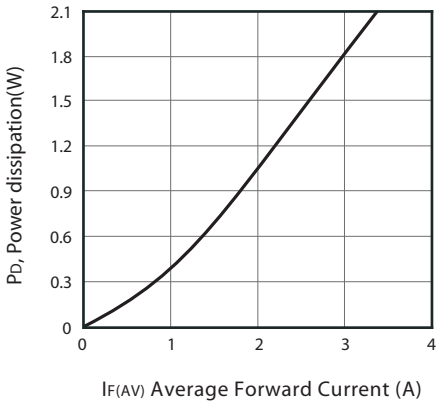

Figure 4. Forward Power Dissipation

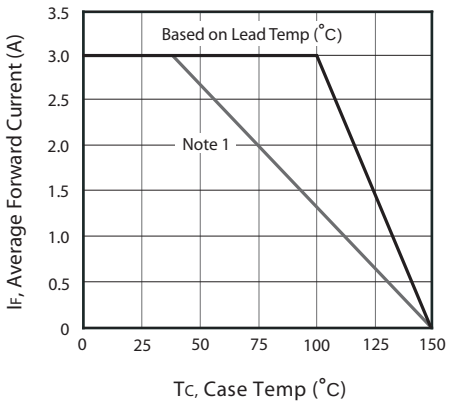

Figure 5. Forward Current Derating Curve

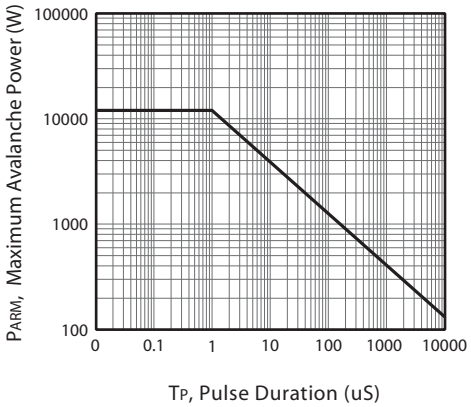

Figure 6. Maximum Avalanche Power Curve

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

PACKAGE OUTLINE DIMENSIONS

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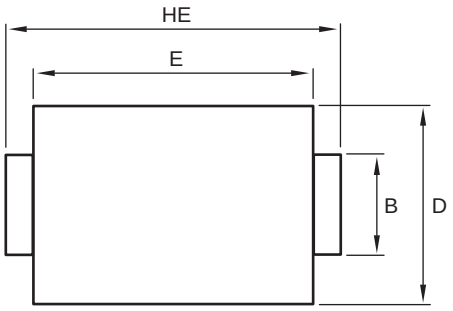
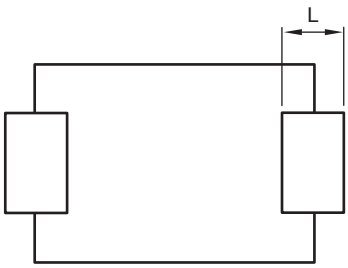
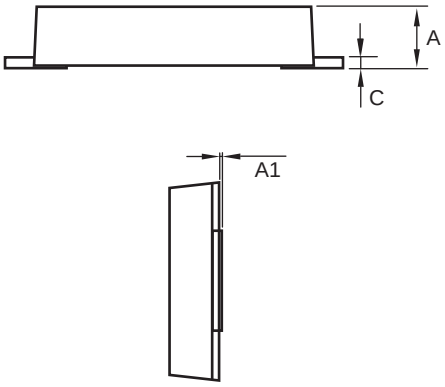
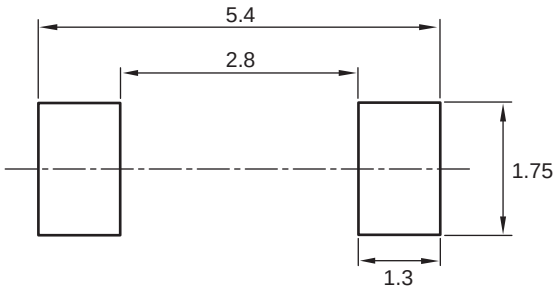




SYMBOLS	MILLIMETERS		
	MIN.	NOM.	MAX.
A	0.900	0.955	1.010
B	1.250	1.350	1.450
C	0.100	0.175	0.250
D	2.600	2.700	2.800
HE	4.800	5.000	5.200
E	4.100	4.200	4.300
L	0.800	0.900	1.000
A1	0.000	0.050	0.100



Mounting Pad Layout (unit:mm)



TOP MARKING DEFINITION

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