

Features

- High Surge Forward Current Capability
- Low Forward Voltage Drop and Low Power Losses
- Lead Free Finish/RoHS Compliant (Note 1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 2)
- Moisture Sensitivity Level 1

5 Amp Low VF Schottky Rectifier 40 to 100 Volts

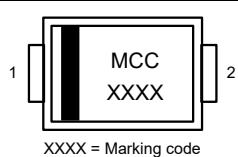
Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value			Unit
		SL54	SL56	SL510	
Peak Repetitive Reverse Voltage	V_{RRM}				
Working Peak Reverse Voltage	V_{RWM}	40	60	100	V
DC Blocking Voltage	V_R				
RMS Reverse Voltage	V_{RMS}	28	42	70	V
Average Rectified Forward Current @ $T_L=100^\circ\text{C}$	$I_{F(AV)}$	5			A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	100			A
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	I^2t	41.5			A^2s

Marking code

Part Number	Marking code
SL54	SL54
SL56	SL56
SL510	SL510

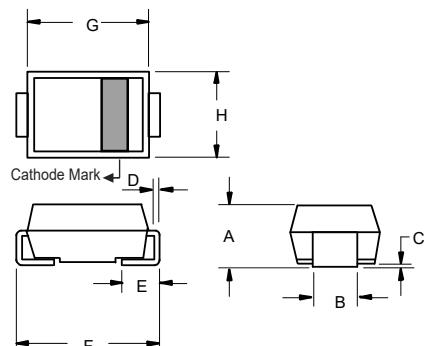
Internal Structure

Pin	Description	Simplified outline	Graphic symbol
1	cathode		
2	anode		

Note:

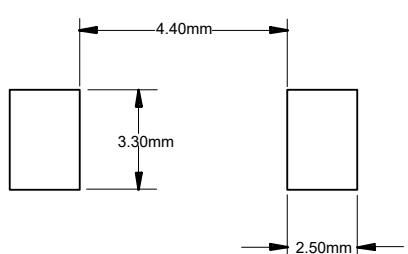
1. High temperature solder exemption applied, see EU directive annex 7a.
2. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

SMC (DO-214AB)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.103	2.00	2.62	
B	0.108	0.128	2.75	3.25	
C	0.002	0.008	0.051	0.203	
D	0.006	0.012	0.152	0.305	
E	0.030	0.060	0.76	1.52	
F	0.305	0.320	7.75	8.13	
G	0.260	0.280	6.60	7.11	
H	0.220	0.245	5.59	6.22	

Suggested Solder Pad Layout



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		150	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		16		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		55		°C/W

Note:

1. Mounted on P.C.B. with 16mm*16mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage SL54 SL56 SL510	V_F	$I_F=5A; T_J=25^\circ C$			0.45 0.50 0.70	V
Reverse Current	I_R	at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$			0.1 50	mA
Junction Capacitance SL54 SL56 SL510	C_J	$V_R=4V; f=1MHz; T_J=25^\circ C$		320 270 520		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

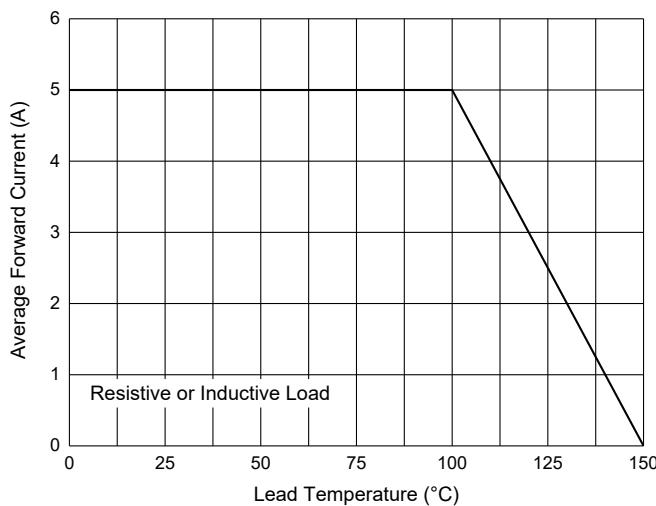


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

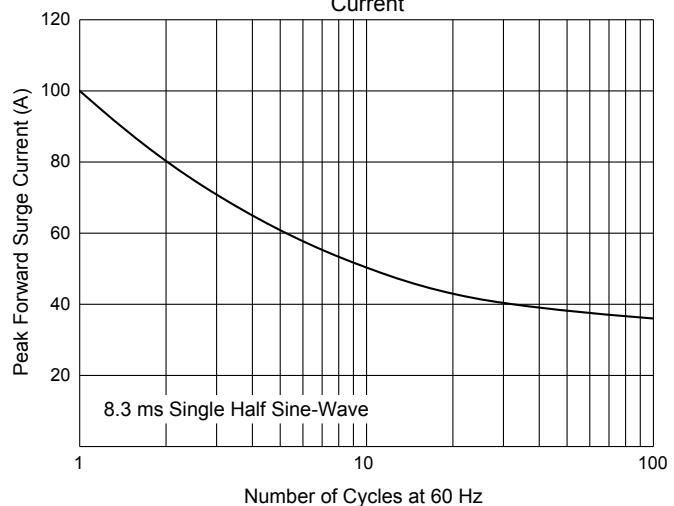


Fig. 3 - Typical Forward Characteristics

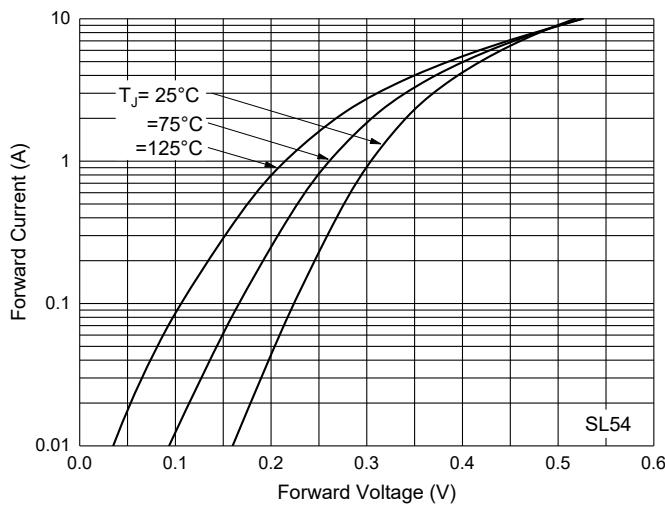


Fig. 4 - Typical Forward Characteristics

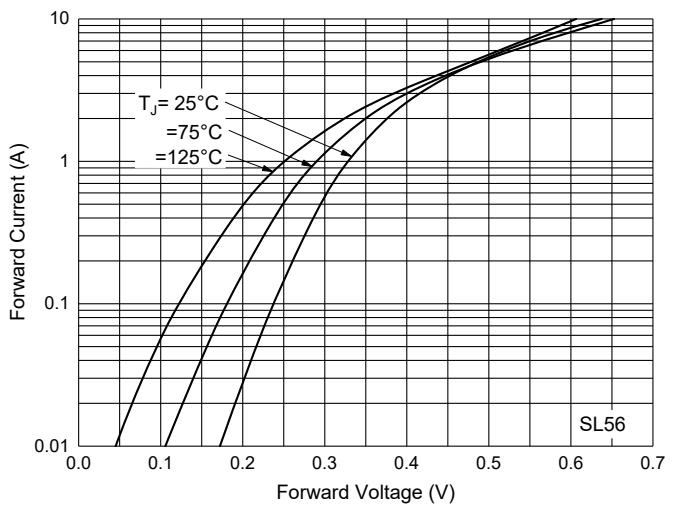


Fig. 5 - Typical Forward Characteristics

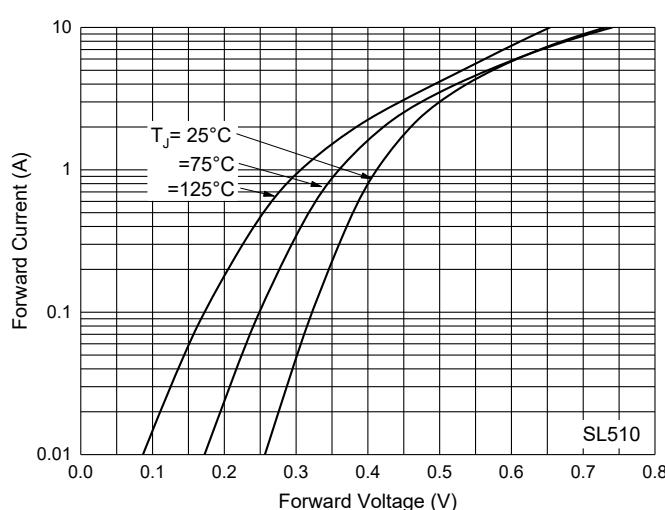
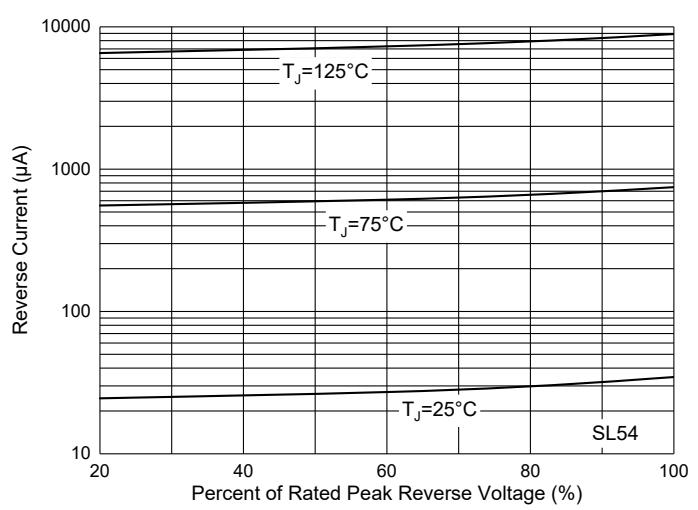


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Reverse Leakage Characteristics

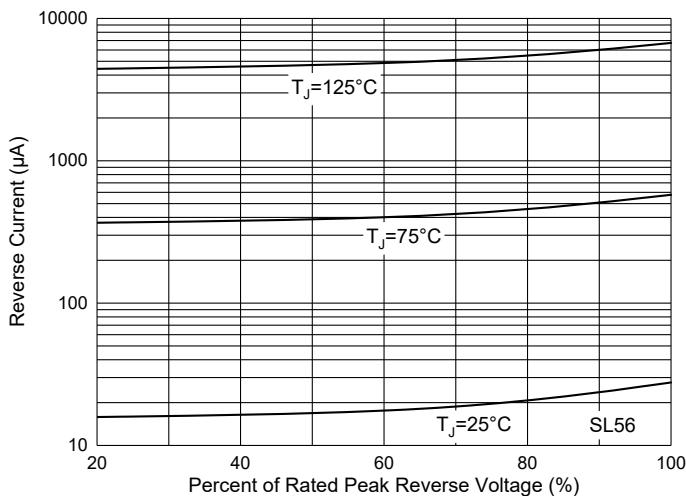


Fig. 8 - Typical Reverse Leakage Characteristics

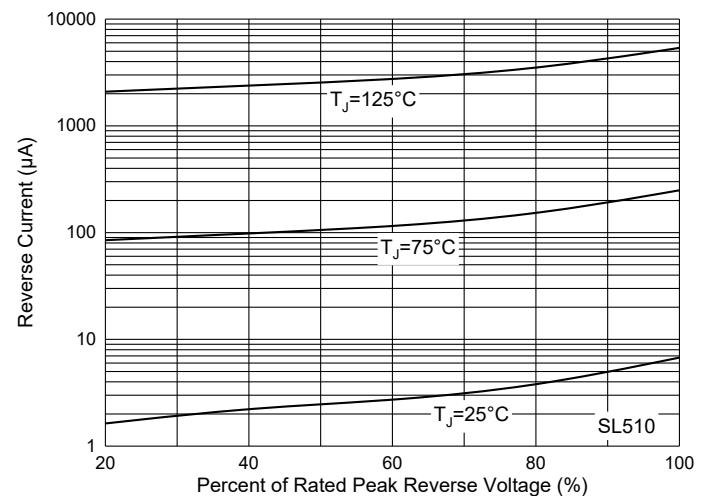


Fig. 9 - Typical Capacitance Characteristics

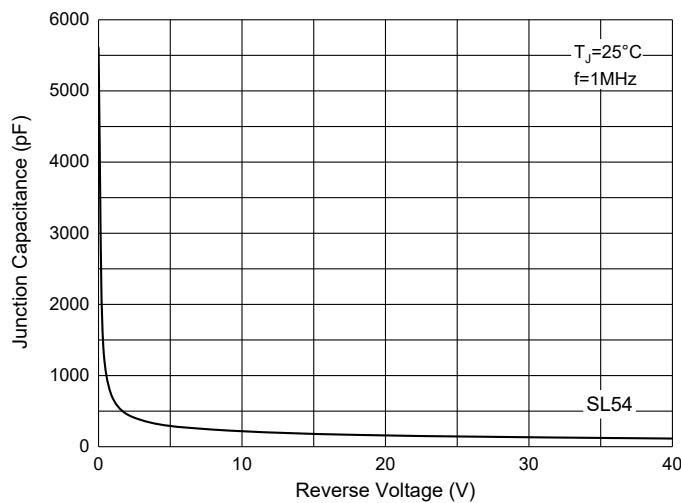


Fig. 10 - Typical Capacitance Characteristics

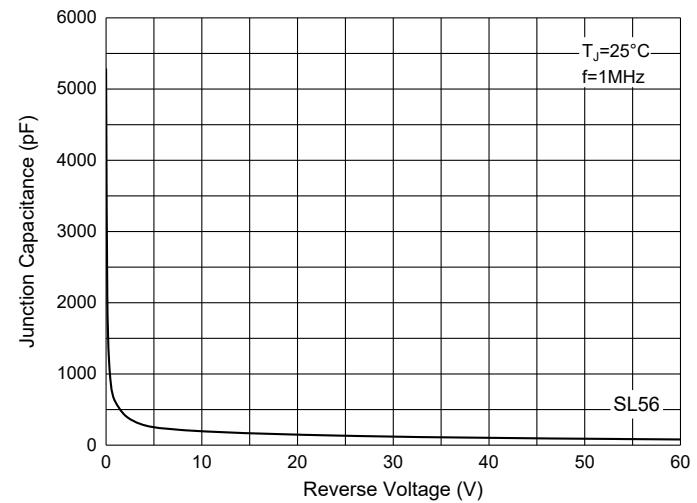
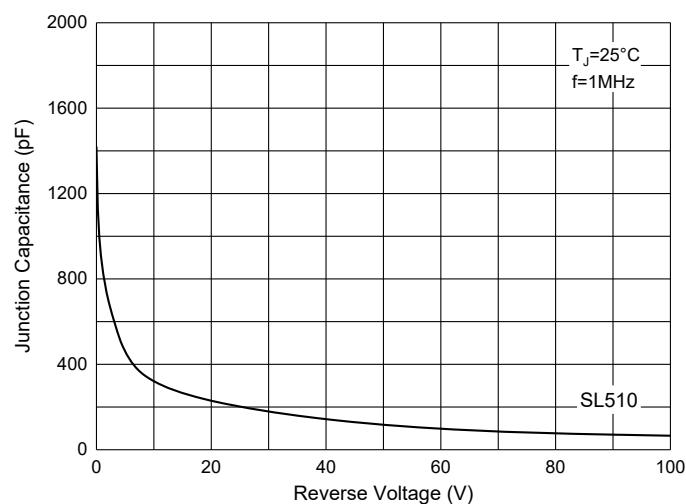


Fig. 11 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:3Kpcs/Reel

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