



THE DATASHEET OF SL510AFL-TP



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

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value			Unit
		SL54AFL	SL56AFL	SL510AFL	
Peak Repetitive Reverse Voltage	V_{RRM}	40	60	100	V
Working Peak Reverse Voltage	V_{RWM}				
DC Blocking Voltage	V_R				
RMS Reverse Voltage	V_{RMS}	28	42	70	V
Average Rectified Forward Current @ $T_L=75^\circ\text{C}$	$I_{F(AV)}$	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 ² s

Marking code

Part Number	Marking code
SL54AFL	SL54
SL56AFL	SL56
SL510AFL	SL510

Internal Structure

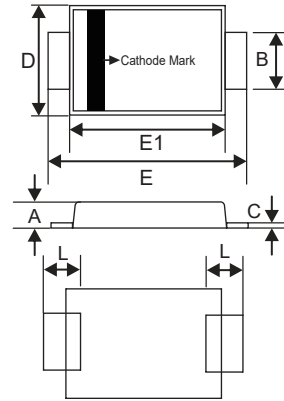
Pin	Description	Simplified outline	Graphic symbol
1	cathode	<p>XXXX = Marking code</p>	
2	anode		

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.

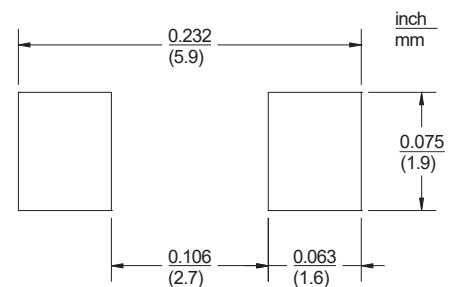
5 Amp Low VF Schottky Rectifier 40 to 100 Volts

DO-221AC(SMA-FL)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.035	0.049	0.90	1.25	
B	0.049	0.065	1.25	1.65	
C	0.004	0.016	0.10	0.40	
D	0.089	0.116	2.25	2.95	
E	0.173	0.220	4.40	5.60	
E1	0.126	0.181	3.20	4.60	
L	0.020	0.059	0.50	1.50	

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		25		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		70		°C/W

Note:

1. Mounted on P.C.B. with 5mm*5mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage SL54AFL SL56AFL SL510AFL	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 SL54AFL SL56AFL SL510AFL	C_J	$V_R=4V; f=1MHz; T_J=25^\circ C$		320 270 520		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

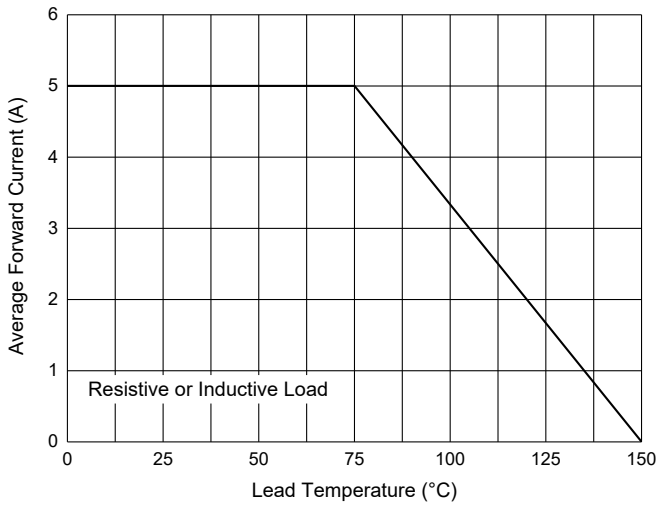


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

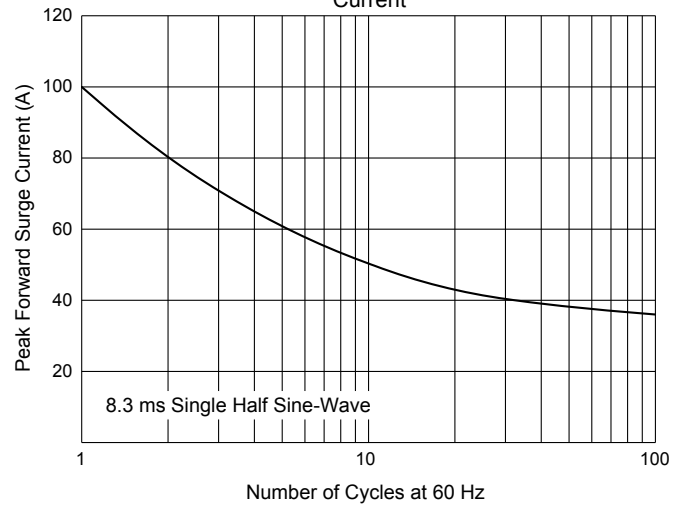


Fig. 3 - Typical Forward Characteristics

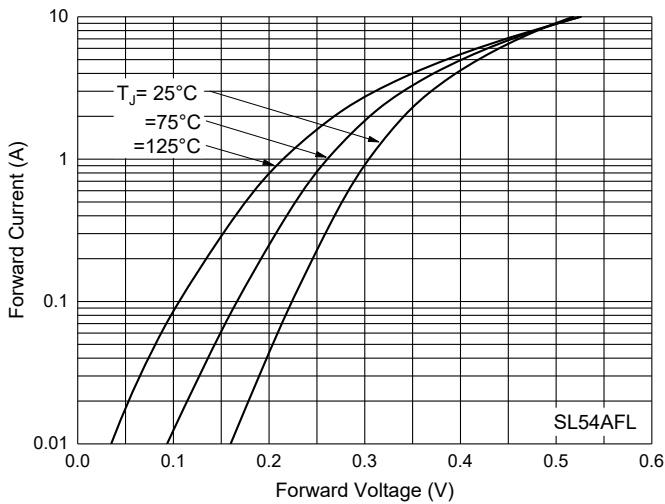


Fig. 4 - Typical Forward Characteristics

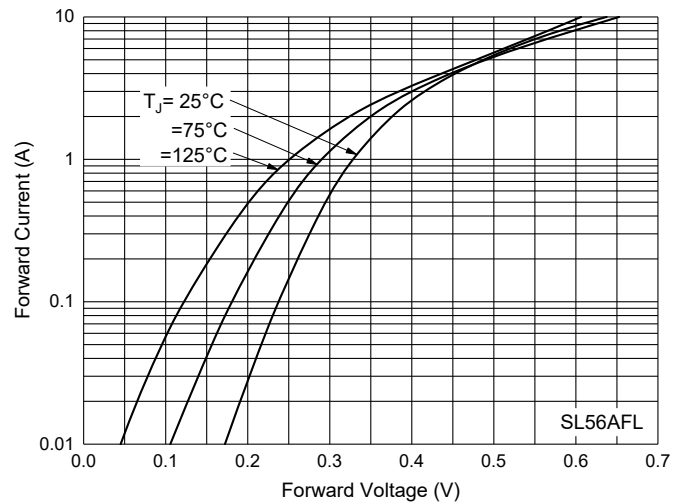


Fig. 5 - Typical Forward Characteristics

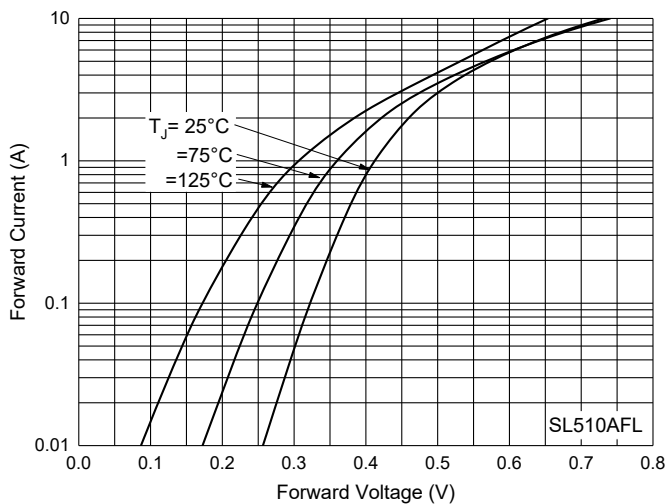
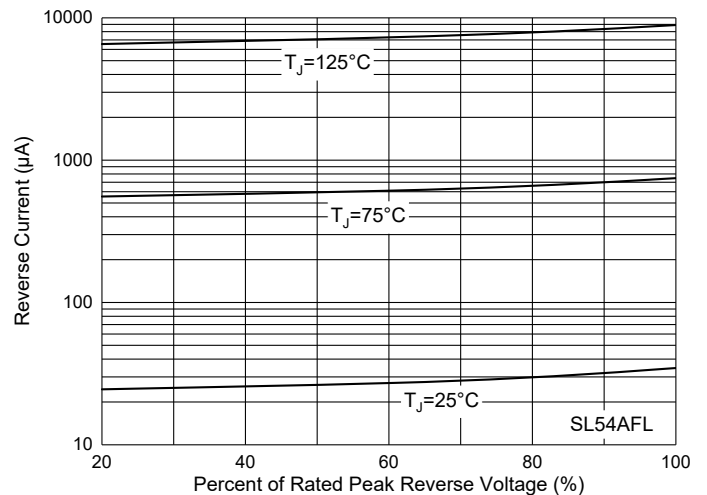


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Reverse Leakage Characteristics

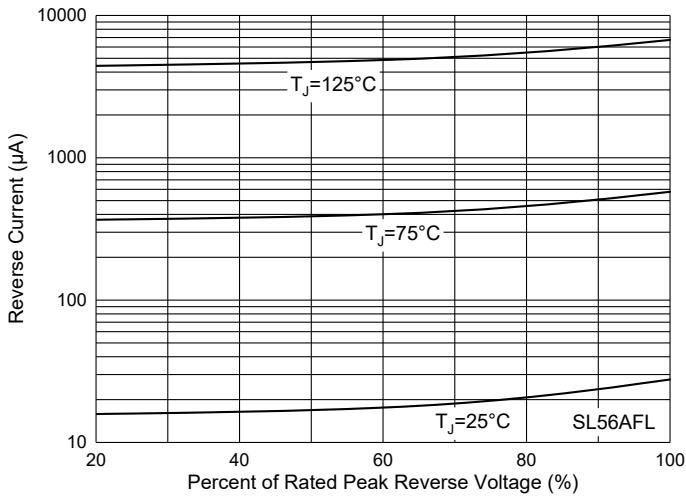


Fig. 8 - Typical Reverse Leakage Characteristics

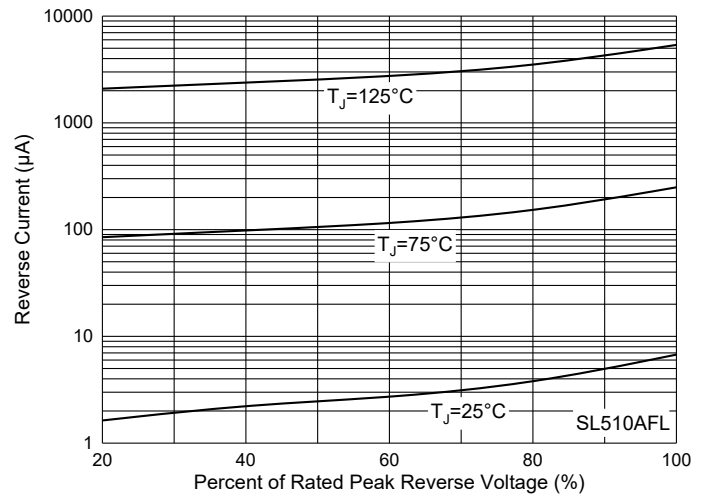


Fig. 9 - Typical Capacitance Characteristics

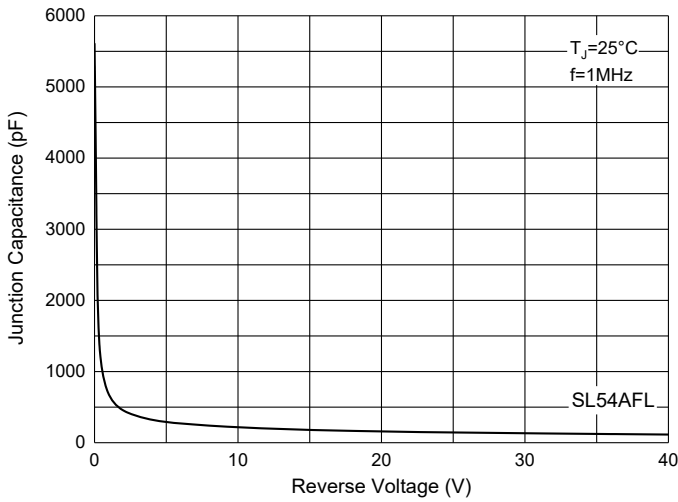


Fig. 10 - Typical Capacitance Characteristics

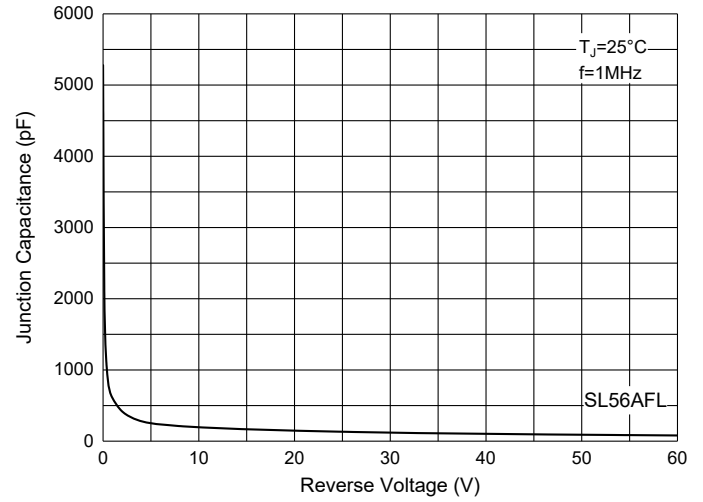
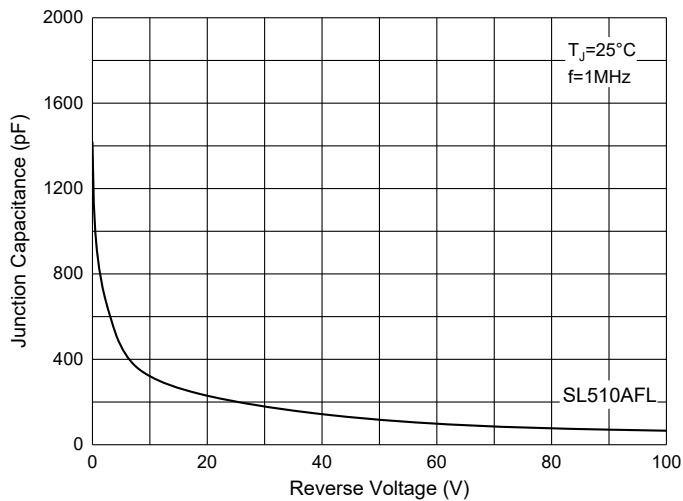


Fig. 11 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:10Kpcs/Reel

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