Features

- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)
- For Surface Mount Application

5 Amp
Schottky Rectifier
20 to 200 Volts

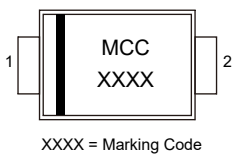
Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value									Unit
		SK 52 AFL	SK 53 AFL	SK 54 AFL	SK 55 AFL	SK 56 AFL	SK 58 AFL	SK 510 AFL	SK 5150 AFL	SK 5200 AFL	
Peak Repetitive Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V
Working Peak Reverse Voltage	V_{RWM}										
DC Blocking Voltage	V_R										
RMS Reverse Voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V
Average Rectified Forward Current	$I_{F(AV)}$	5									A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	100									A
Current Squared Time @1ms≤t≤8.3ms	I^2t	41.5									A^2s

Marking Code

Part Number	Marking Code
SK52AFL	SK52
SK53AFL	SK53
SK54AFL	SK54
SK55AFL	SK55
SK56AFL	SK56
SK58AFL	SK58
SK510AFL	SK510
SK5150AFL	SK5150
SK5200AFL	SK5200

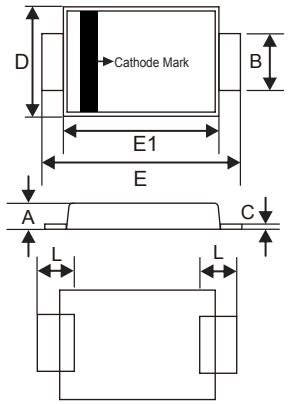
Internal Structure

Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	 XXXX = Marking Code	
2	Anode		

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

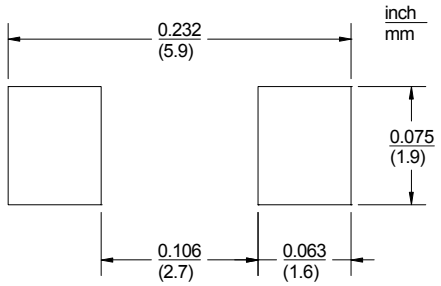
2. High temperature solder exemption applied, see EU directive annex 7a.

DO-221AC(SMA-FL)



DIMENSIONS					
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	SK52AFL ~ SK54AFL	-55		125	°C
T_J	Operating Junction Temperature Range	SK55AFL ~ SK510AFL	-55		150	°C
T_J	Operating Junction Temperature Range	SK5150AFL ~ SK5200AFL	-55		175	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$Rth_{(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		18		°C/W
$Rth_{(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		70		°C/W

Note:
1.Mounted on P.C.B. with 8mm*8mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage						
SK52AFL ~ SK54AFL	V_F	I_F=5A;T_J=25°C			0.55	V
SK55AFL ~ SK56AFL					0.70	
SK58AFL ~ SK510AFL					0.85	
SK5150AFL					0.87	
SK5200AFL					0.90	
Reverse Current						
SK52AFL ~ SK56AFL	I_R	at Rated V_R;T_J=25°C			0.1	mA
		at Rated V_R;T_J=100°C			10	
SK58AFL ~ SK5200AFL		at Rated V_R;T_J=25°C			0.01	
		at Rated V_R;T_J=100°C			1	
Junction Capacitance						
SK52AFL ~ SK54AFL	C_J	V_R=4V;f=1MHz;T_J=25°C		275		pF
SK55AFL ~ SK56AFL				195		
SK58AFL ~ SK510AFL				135		
SK5150AFL ~ SK5200AFL				95		

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

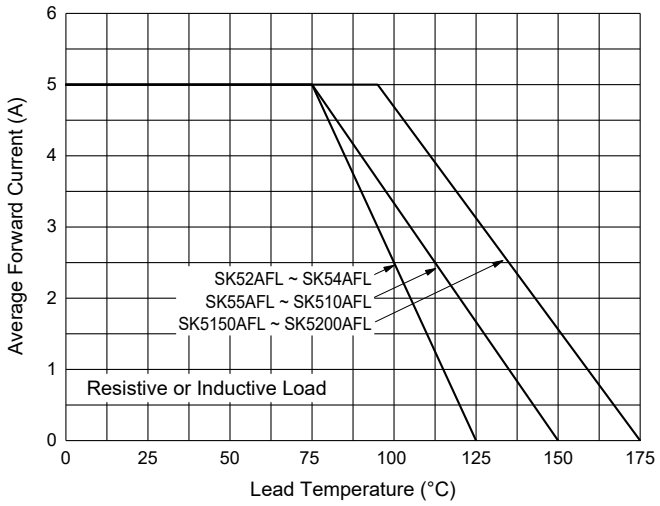


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

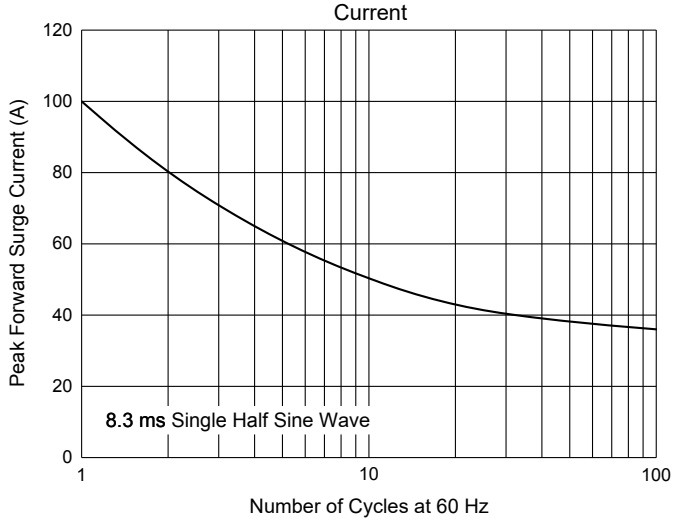


Fig. 3 - Typical Forward Characteristics

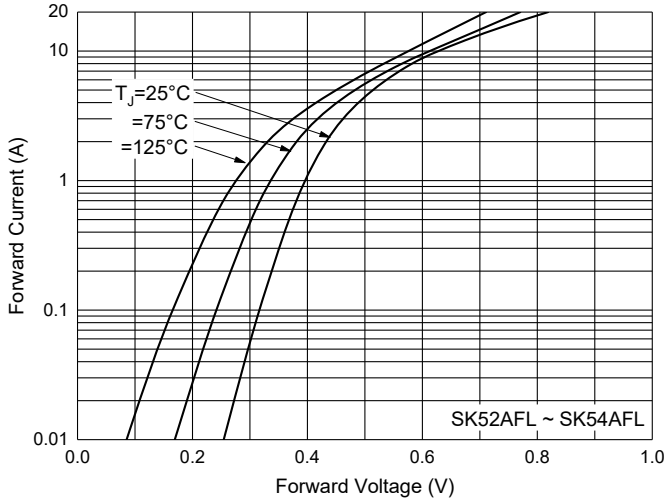


Fig. 4 - Typical Reverse Leakage Characteristics

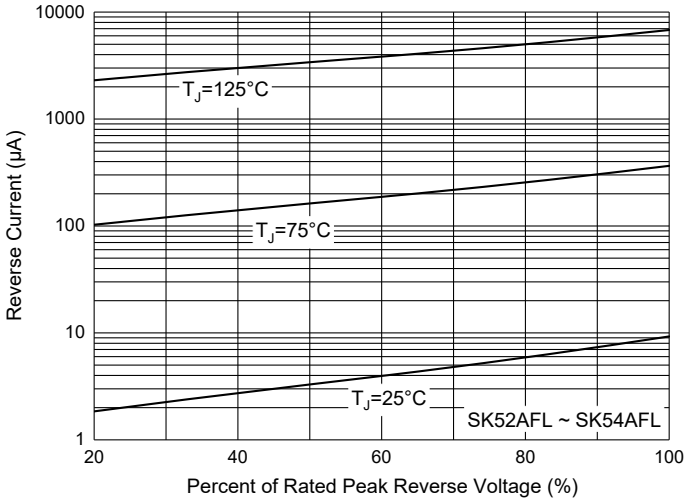


Fig. 5 - Typical Forward Characteristics

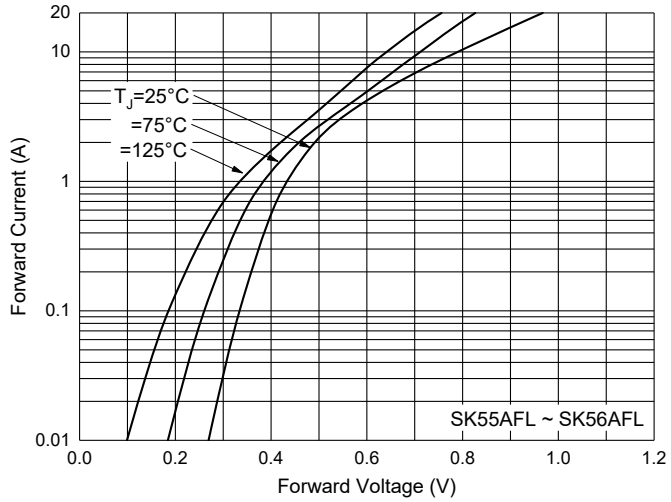
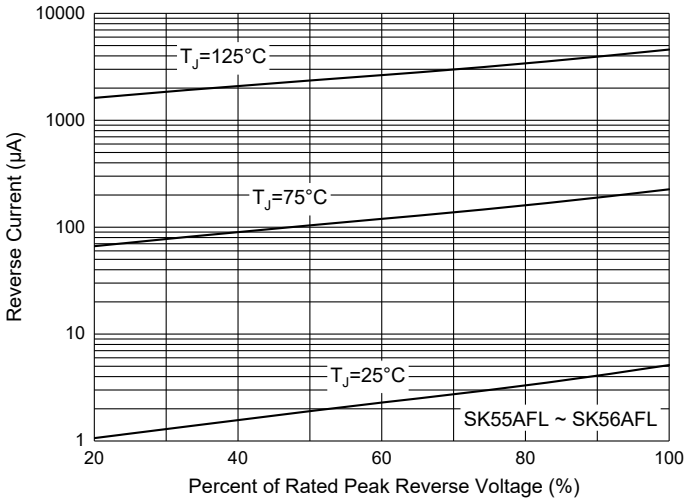


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Forward Characteristics

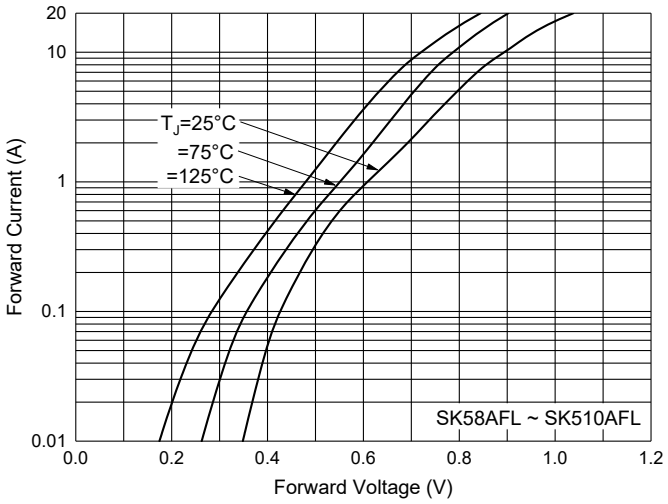


Fig. 8 - Typical Reverse Leakage Characteristics

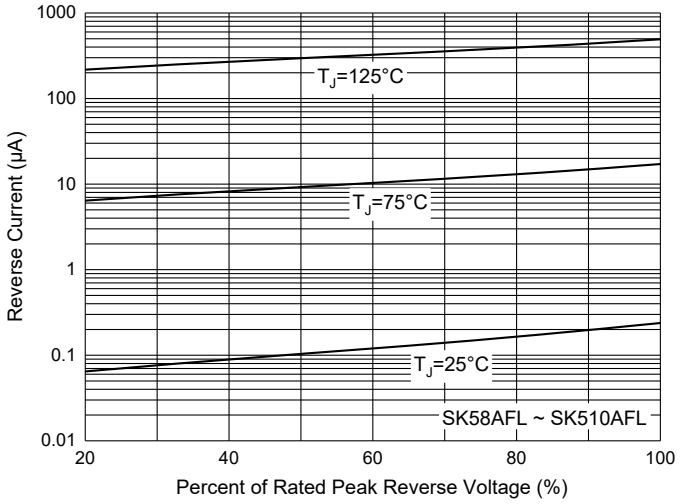


Fig. 9 - Typical Forward Characteristics

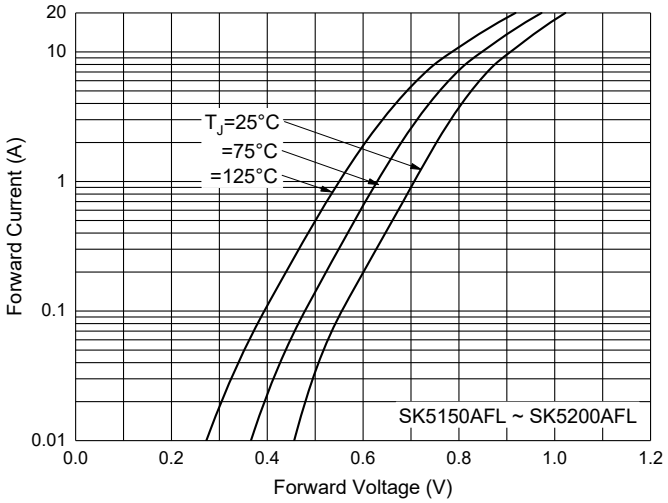


Fig. 10 - Typical Reverse Leakage Characteristics

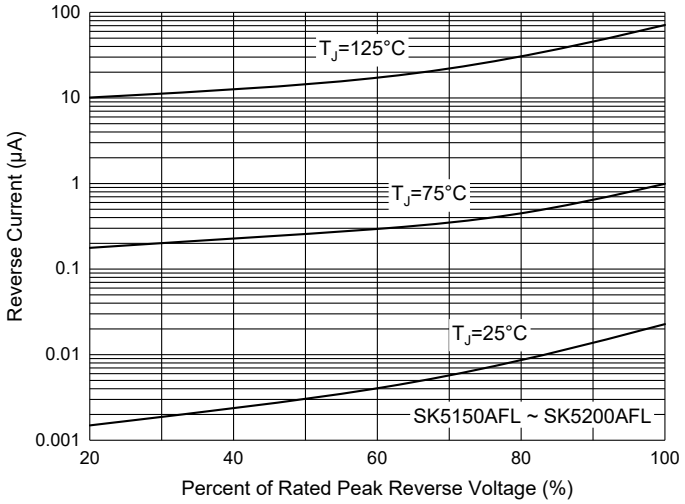


Fig. 11 - Typical Capacitance Characteristics

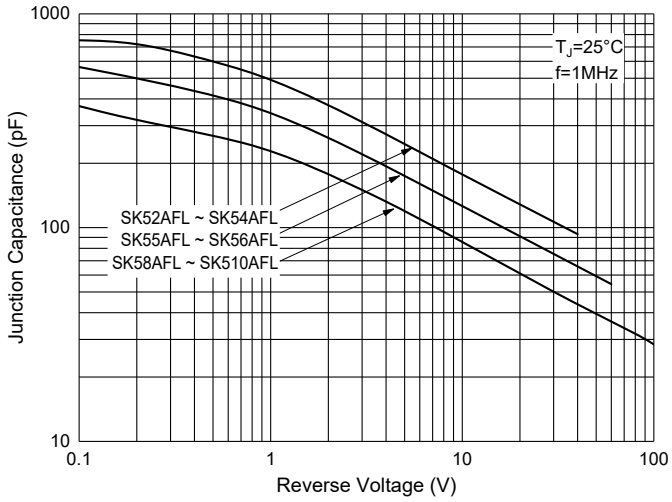
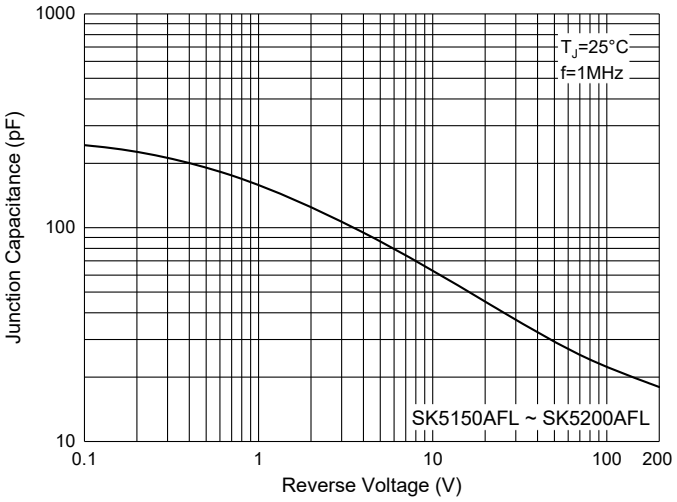


Fig. 12 - Typical Capacitance Characteristics



Ordering Information

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