Features

- Halogen Free. "Green" Device (Note 1)
- Fully Automotive Qualified to AEC-Q101
- Low Profile Package
- High Surge Capability
- 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)

5 Amp Surface Mount Schottky Rectifier 40 to 60 Volts

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value		Unit
		SK54AQ-L	SK56AQ-L	
Peak Repetitive Reverse Voltage	V_{RRM}	40	60	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
RMS Reverse Voltage	V_{RMS}	28	42	V
Average Rectified Forward Current @ T_L=80°C	$I_{F(AV)}$	5		A
Non−Repetitive Peak Surge Current @8.3ms Half Sine Wave	I_{FSM}	120		A
Current Squared Time @ 1ms≤t≤8.3ms	I^2t	59.76		A^2s

Marking code

Part Number	Marking code
SK54AQ-L	SK54A
SK56AQ-L	SK56A

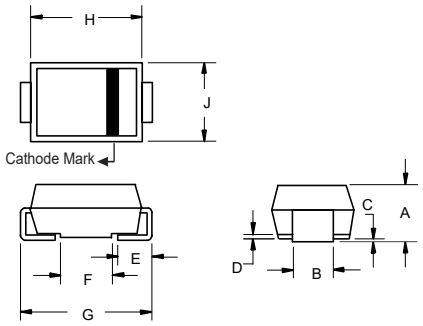
Internal Structure

Pin	Description	Simplified outline	Graphic symbol
1	cathode	 XXXX = Marking code YYWW = Date 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.

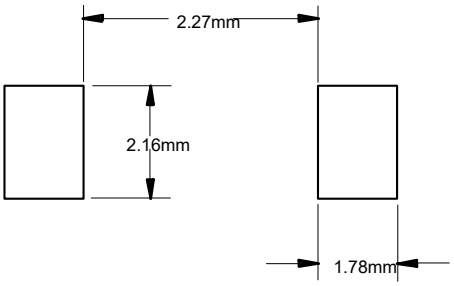
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

SMA (DO-214AC)



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.075	0.096	1.90	2.44	
B	0.050	0.064	1.27	1.63	
C	0.002	0.008	0.051	0.203	
D	---	0.020	---	0.51	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.189	0.220	4.80	5.59	
H	0.157	0.187	4.00	4.75	
J	0.090	0.115	2.25	2.92	

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
$Rth_{(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		22		°C/W
$Rth_{(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		65		°C/W

Note:
1.Mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage						
SK54AQ-L	V_F	I_F=5A;T_J=25°C		0.52	0.60	V
		I_F=5A;T_J=125°C		0.45	0.54	
SK56AQ-L		I_F=5A;T_J=25°C		0.63	0.70	
		I_F=5A;T_J=125°C		0.58	0.63	
Reverse Current						
SK54AQ-L	I_R	at Rated V_R;T_J=25°C			0.1	mA
		at Rated V_R;T_J=125°C			20	
SK56AQ-L		at Rated V_R;T_J=25°C			0.1	
		at Rated V_R;T_J=125°C			20	
Junction Capacitance						
SK54AQ-L	C_J	V_R=4V;f=1MHz;T_J=25°C		265		pF
SK56AQ-L				215		

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

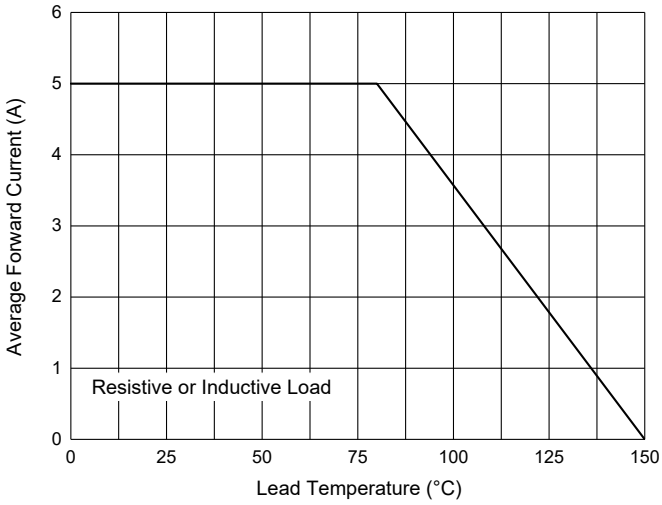


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

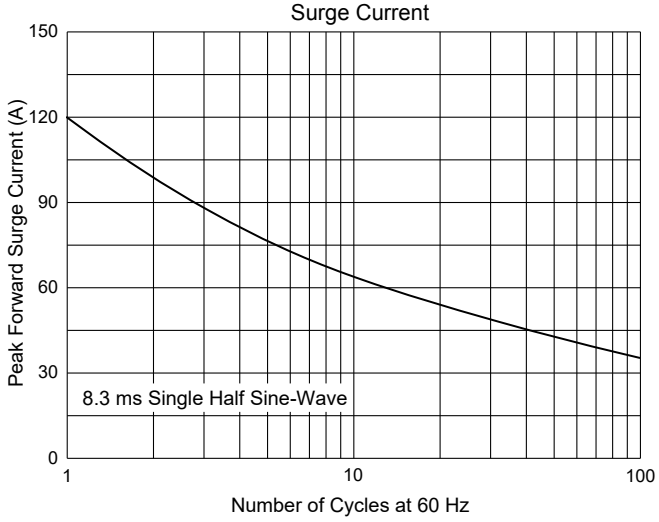


Fig. 3 - Typical Forward Characteristics

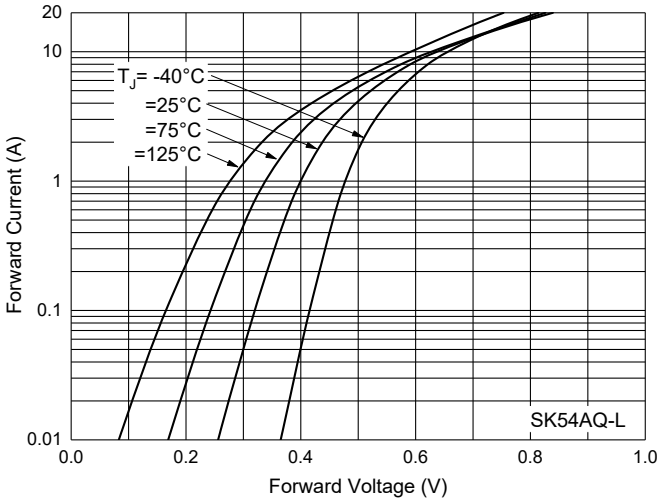


Fig. 4 - Typical Reverse Leakage Characteristics

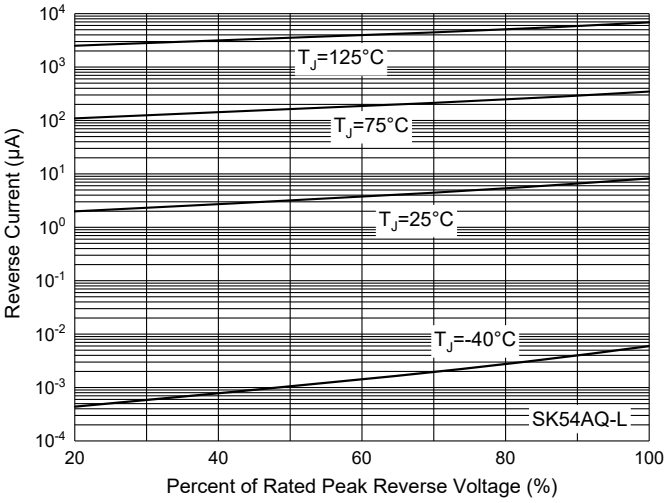


Fig. 5 - Typical Forward Characteristics

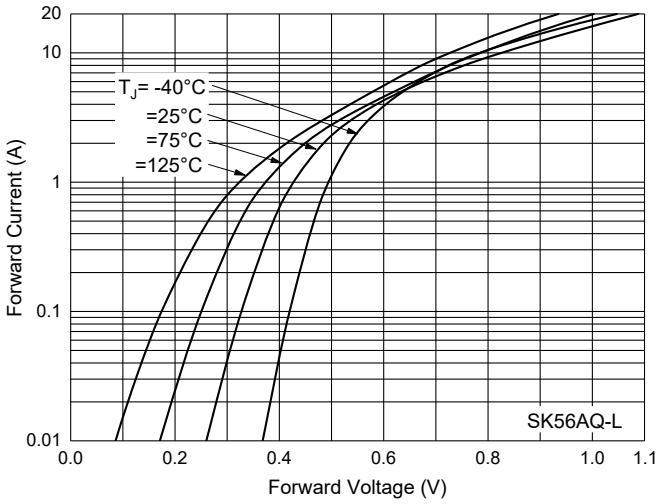
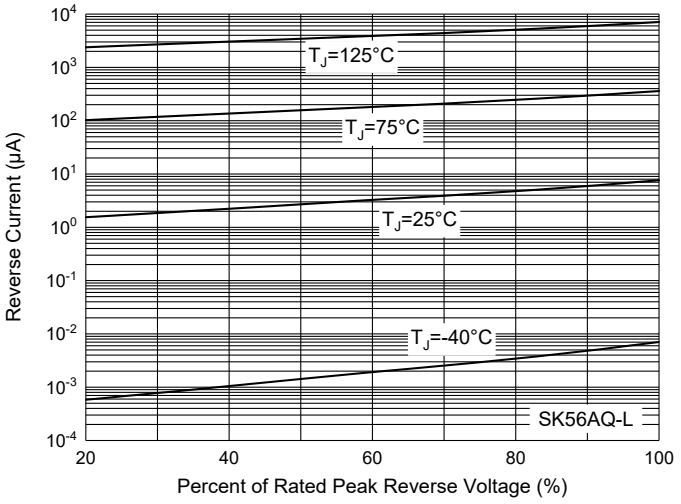


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Capacitance Characteristics

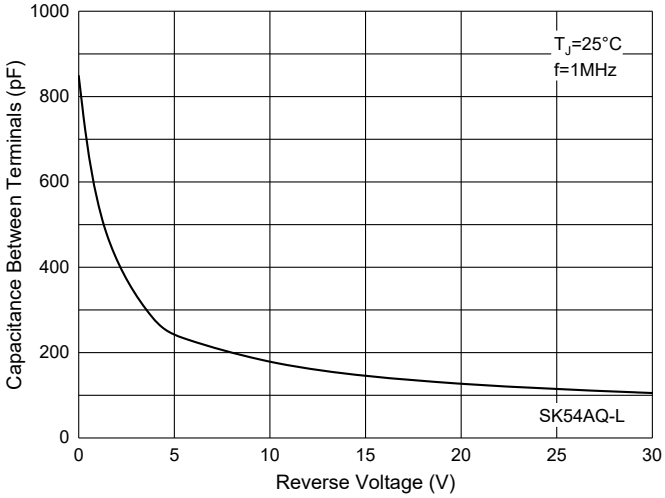
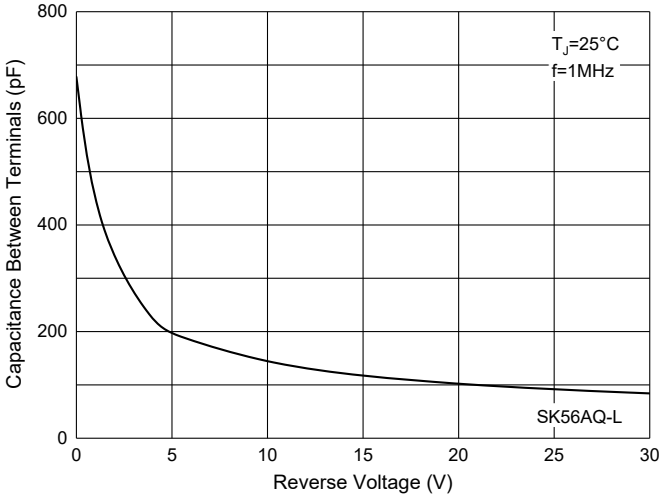


Fig. 8 - Capacitance Characteristics



Ordering Information

Device	Packing
SK54AQ-LTP ~ SK56AQ-LTP	Tape&Reel:5Kpcs/Reel