

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)

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 @ $T_L=80^\circ\text{C}$	$I_{F(AV)}$	5		A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	120		A
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	I^2t	59.76		A ² s

Marking code

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

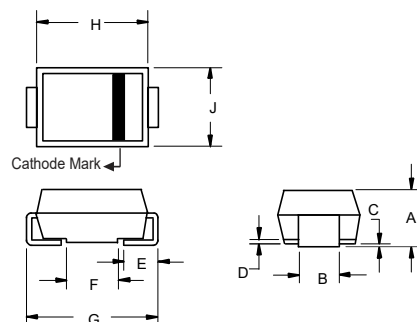
Internal Structure

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.

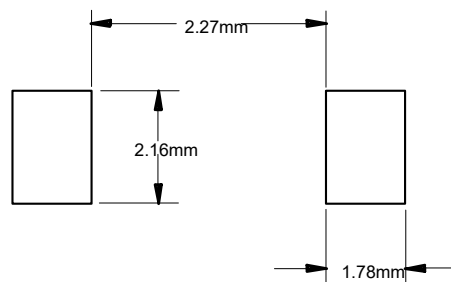
5 Amp Surface Mount Schottky Rectifier 40 to 60 Volts

SMA (DO-214AC)



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
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		22		°C/W
$R_{th(J-A)}$	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	$I_F=5A; T_J=25^{\circ}C$		0.52	0.60	V
		$I_F=5A; T_J=125^{\circ}C$		0.45	0.54	
SK56AQ-L		$I_F=5A; T_J=25^{\circ}C$		0.63	0.70	
		$I_F=5A; T_J=125^{\circ}C$		0.58	0.63	
Reverse Current						
SK54AQ-L	I_R	at Rated $V_R; T_J=25^{\circ}C$			0.1	mA
		at Rated $V_R; T_J=125^{\circ}C$			20	
SK56AQ-L		at Rated $V_R; T_J=25^{\circ}C$			0.1	
		at Rated $V_R; T_J=125^{\circ}C$			20	
Junction Capacitance						
SK54AQ-L	C_J	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		265		pF
SK56AQ-L				215		

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

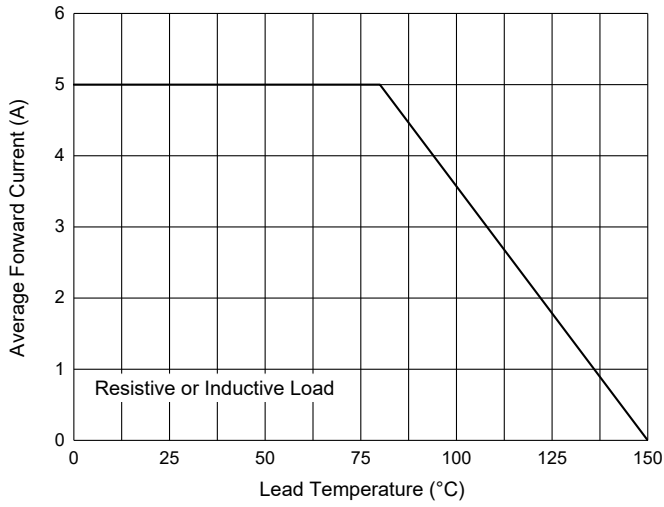


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

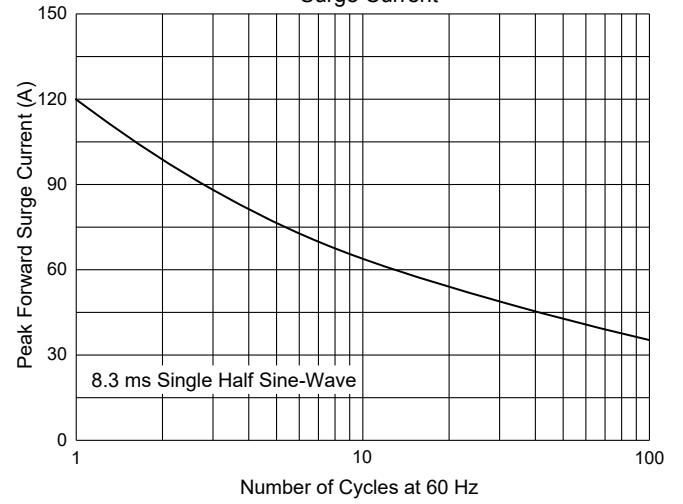


Fig. 3 - Typical Forward Characteristics

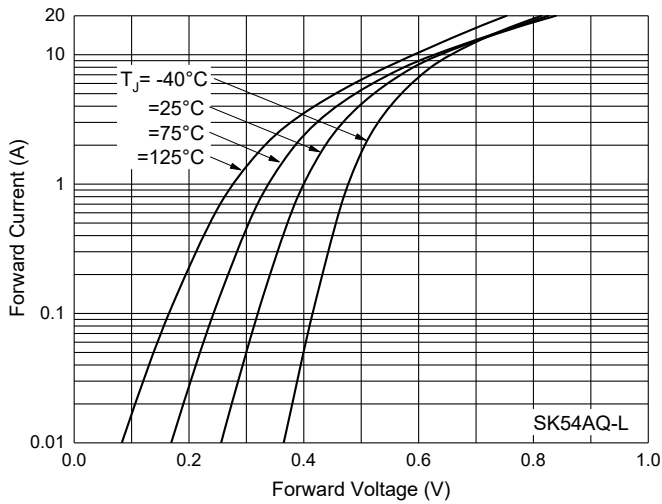


Fig. 4 - Typical Reverse Leakage Characteristics

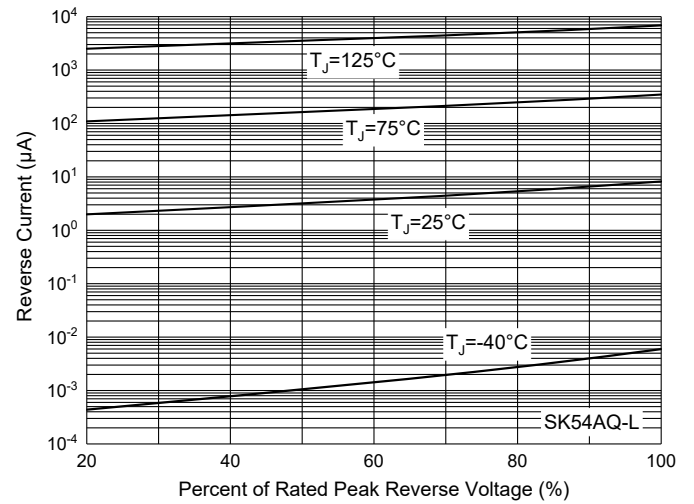


Fig. 5 - Typical Forward Characteristics

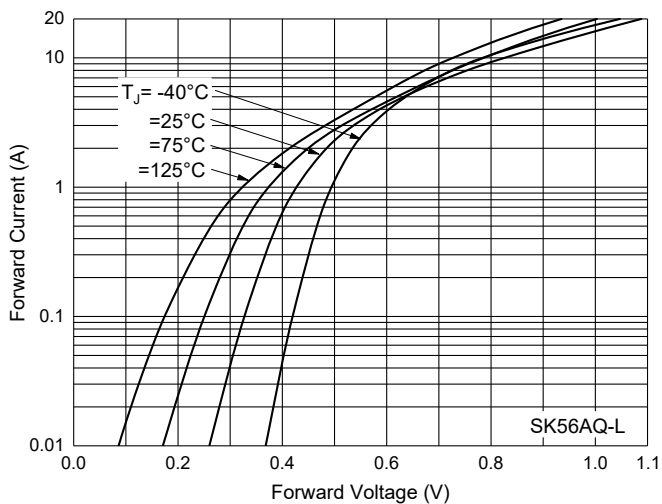
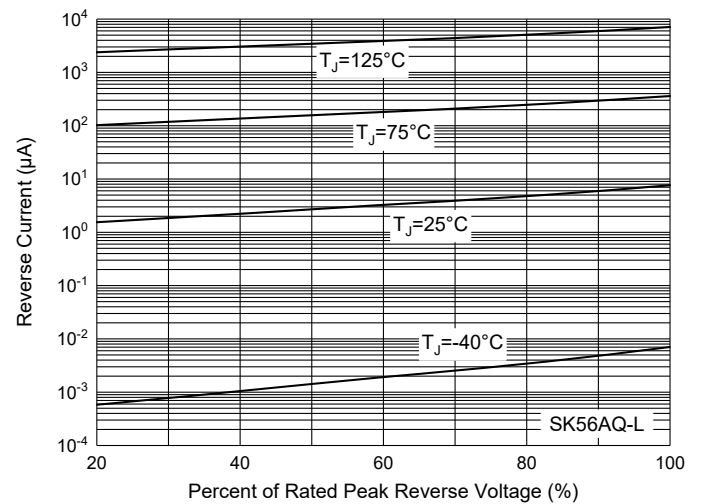


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Capacitance Characteristics

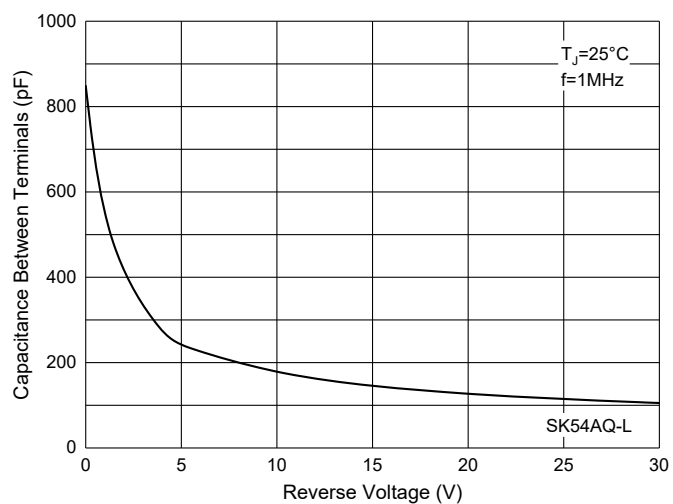
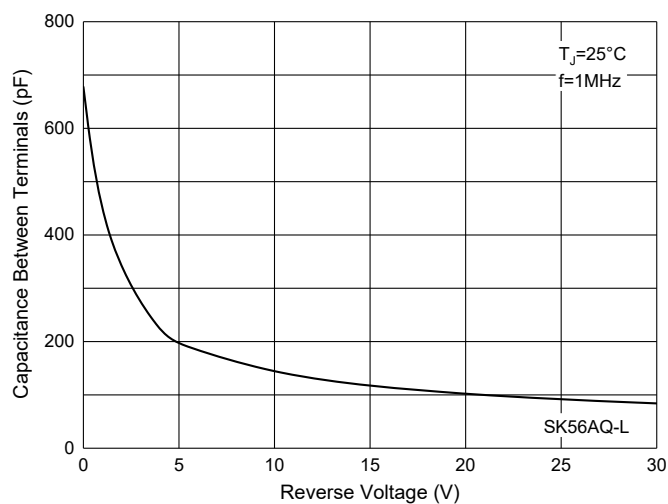


Fig. 8 - Capacitance Characteristics



Ordering Information

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

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