

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
		SK54BQ-L	SK56BQ-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 @ $T_L=85^\circ\text{C}$	$I_{F(AV)}$	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^2s

Marking code

Part Number	Marking code
SK54BQ-L	SK54B
SK56BQ-L	SK56B

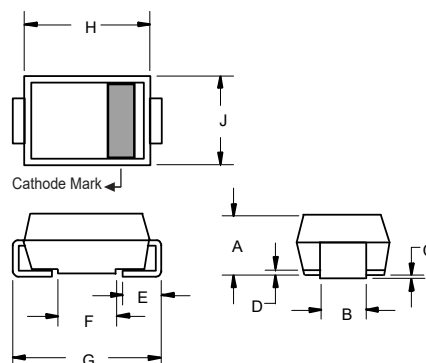
Internal Structure

Pin	Description	Simplified outline	Graphic symbol
1	cathode	<p>XXXX = Marking code YYWW = Date Code</p>	
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.

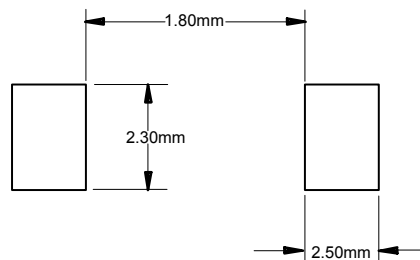
5 Amp Surface Mount Schottky Rectifier 40 to 60 Volts

DO-214AA (SMB) (LEAD FRAME)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.103	2.00	2.62	
B	0.075	0.087	1.91	2.21	
C	0.002	0.008	0.05	0.20	
D	0.006	0.012	0.15	0.31	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.200	0.220	5.08	5.59	
H	0.160	0.191	4.06	4.85	
J	0.130	0.155	3.30	3.94	

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		20		°C/W
R _{th(J-A)}	Thermal Resistance from Junction to Ambient	Note 1		60		°C/W

Note:
 1. Mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage						
SK54BQ-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	
SK56BQ-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						
SK54BQ-L	I _R	at Rated V _R ; T _J =25°C			0.1	mA
		at Rated V _R ; T _J =125°C			20	
SK56BQ-L		at Rated V _R ; T _J =25°C			0.1	
		at Rated V _R ; T _J =125°C			20	
Junction Capacitance						
SK54BQ-L	C _J	V _R =4V; f=1MHz; T _J =25°C		265		pF
SK56BQ-L				215		

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

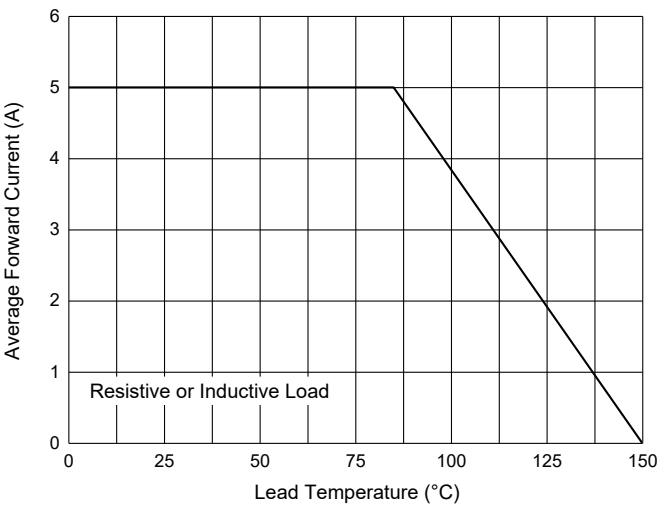


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

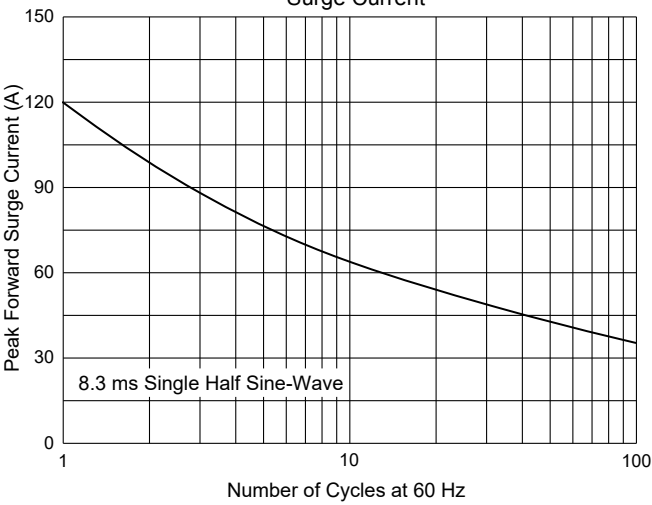


Fig. 3 - Typical Forward Characteristics

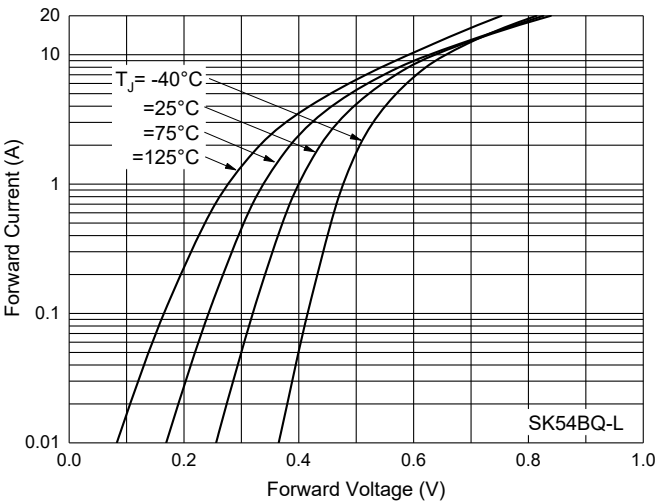


Fig. 4 - Typical Reverse Leakage Characteristics

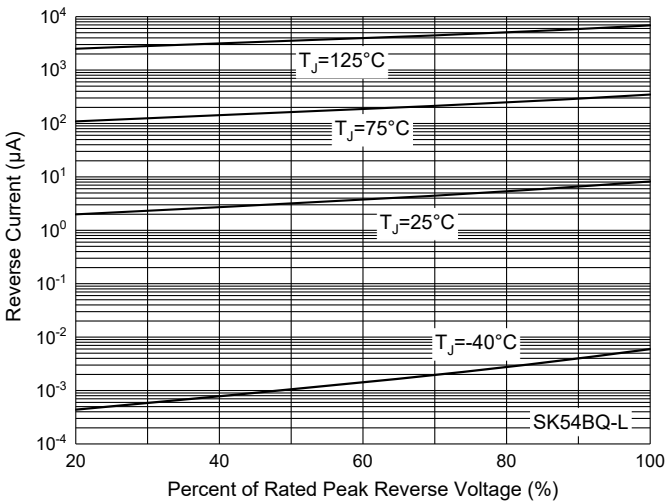


Fig. 5 - Typical Forward Characteristics

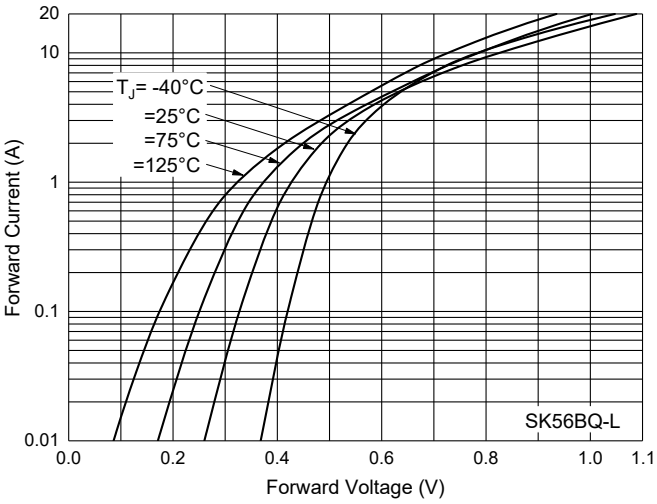
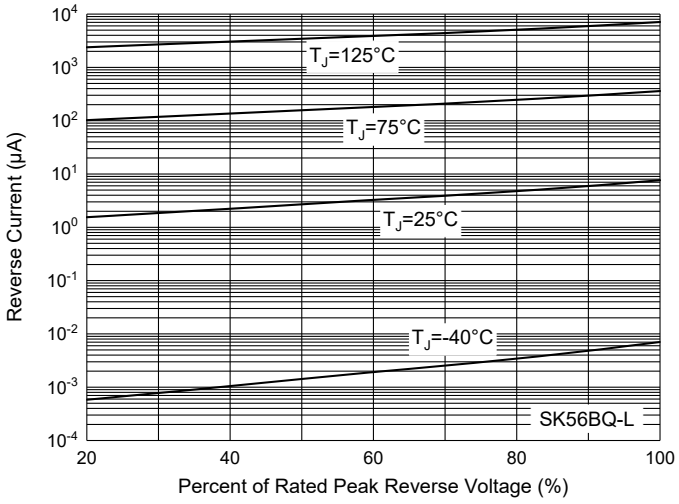


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Capacitance Characteristics

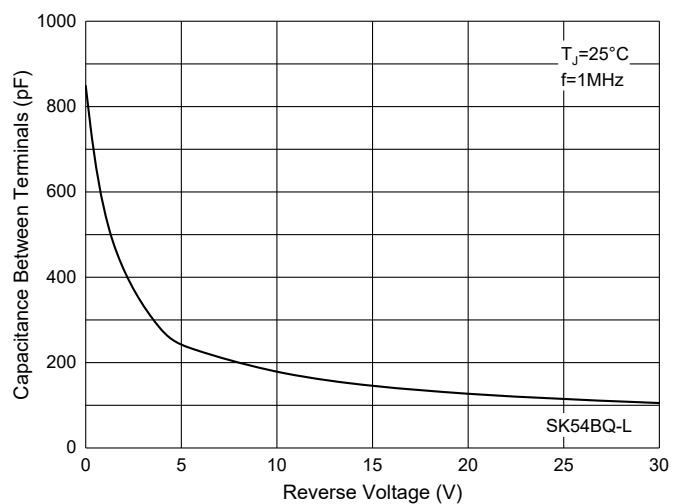
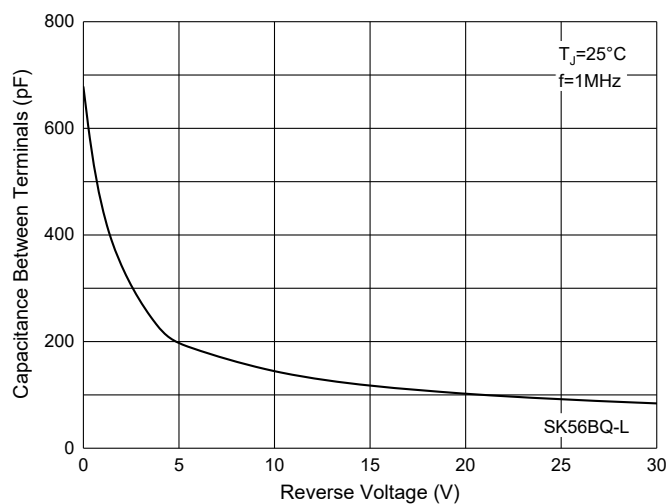


Fig. 8 - Capacitance Characteristics



Ordering Information

Device	Packing
SK54BQ-LTP ~ SK56BQ-LTP	Tape&Reel:3Kpcs/Reel

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