

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
		SK810LQ	SK820LQ	
Peak Repetitive Reverse Voltage	V_{RRM}	100	200	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
RMS Reverse Voltage	V_{RMS}	70	140	V
Average Rectified Forward Current @ $T_L=95^\circ\text{C}$	$I_{F(AV)}$	8		A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	150		A
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	I^2t	93.375		A^2s

Marking code

Part Number	Marking code
SK810LQ	SK810
SK820LQ	SK820

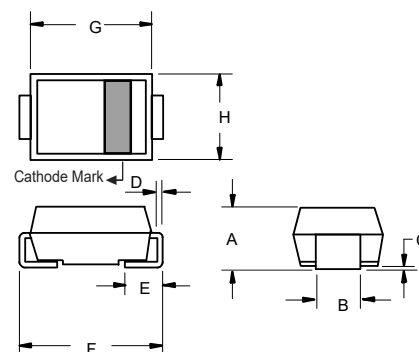
Internal Structure

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.

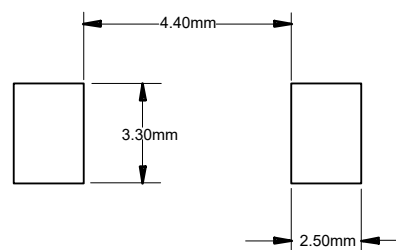
8 Amp Surface Mount Schottky Rectifier 100 to 200 Volts

SMC (DO-214AB)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.103	2.00	2.62	
B	0.108	0.128	2.75	3.25	
C	0.002	0.008	0.051	0.203	
D	0.006	0.012	0.152	0.305	
E	0.030	0.060	0.76	1.52	
F	0.305	0.320	7.75	8.13	
G	0.260	0.280	6.60	7.11	
H	0.220	0.245	5.59	6.22	

Suggested Solder Pad Layout



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		175	°C
T_{stg}	Storage Temperature Range		-55		175	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		12		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		45		°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						
SK810LQ	V_F	$I_F=8A; T_J=25^{\circ}C$		0.76	0.85	V
		$I_F=8A; T_J=125^{\circ}C$		0.62	0.70	
SK820LQ		$I_F=8A; T_J=25^{\circ}C$		0.81	0.90	
		$I_F=8A; T_J=125^{\circ}C$		0.68	0.80	
Reverse Current						
SK810LQ	I_R	at Rated $V_R; T_J=25^{\circ}C$			5	uA
		at Rated $V_R; T_J=125^{\circ}C$			200	
SK820LQ		at Rated $V_R; T_J=25^{\circ}C$			5	
		at Rated $V_R; T_J=125^{\circ}C$			200	
Junction Capacitance						
SK810LQ	C_J	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		275		pF
SK820LQ				165		

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

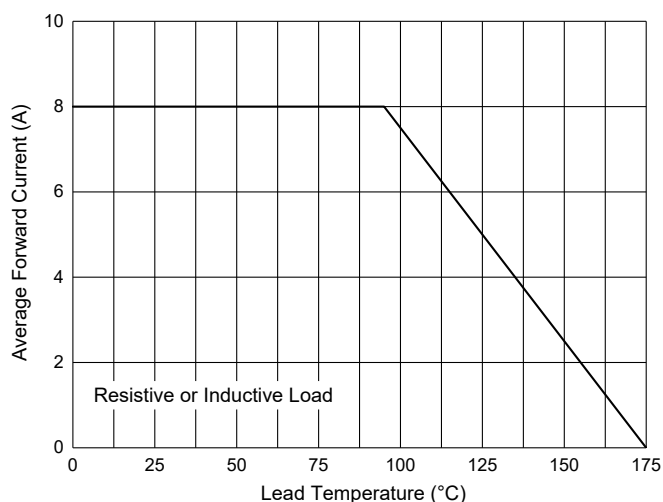


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

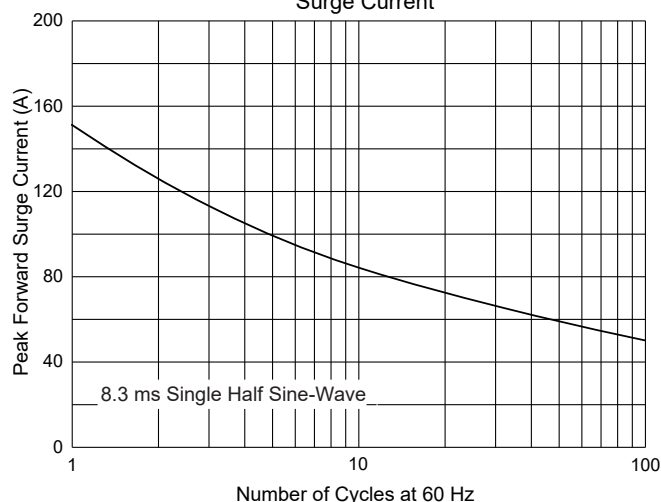


Fig. 3 - Typical Forward Characteristics

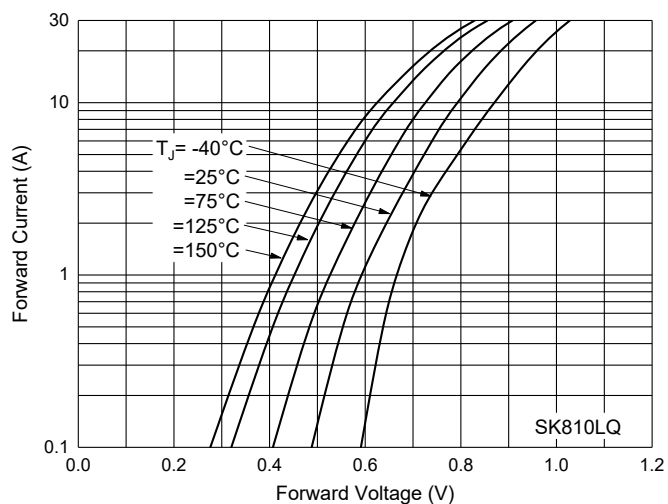


Fig. 4 - Typical Reverse Leakage Characteristics

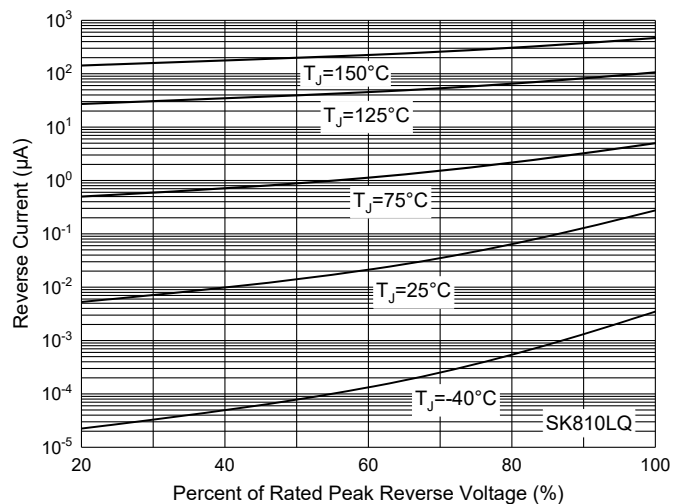


Fig. 5 - Typical Forward Characteristics

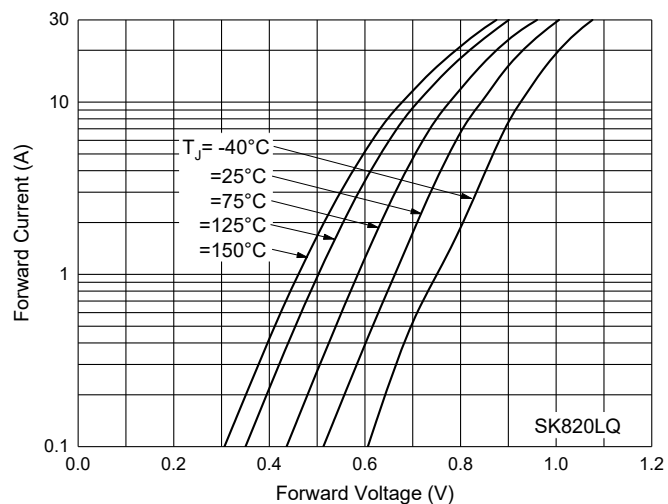
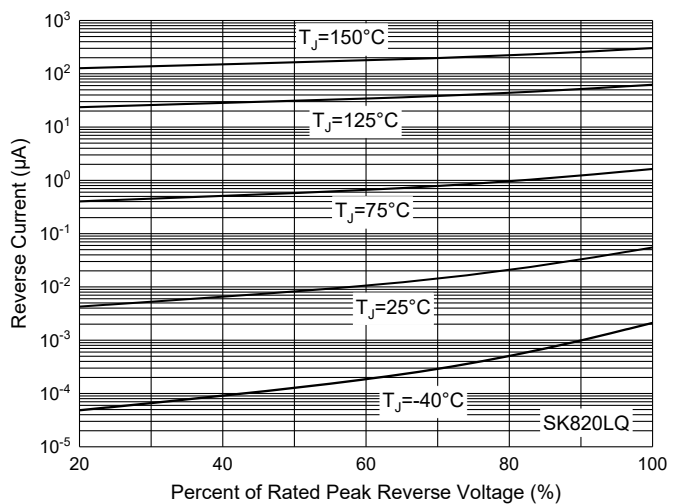


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Capacitance Characteristics

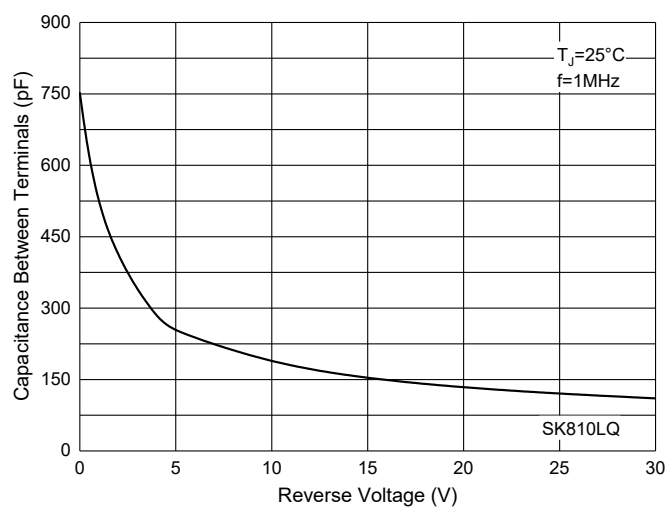
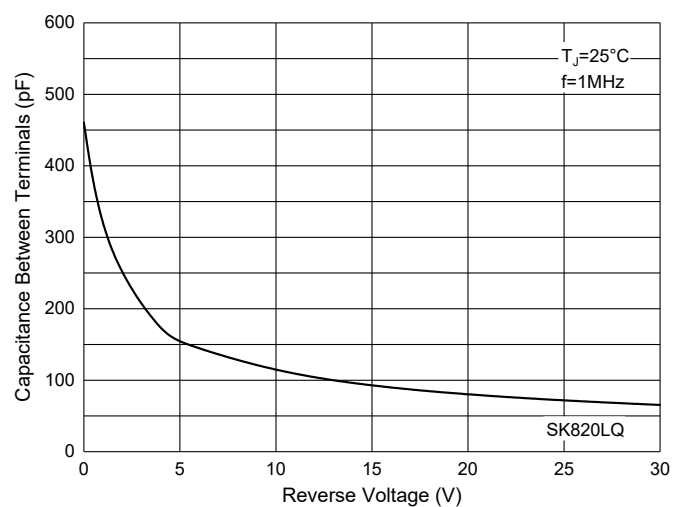


Fig. 8 - Capacitance Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:3Kpcs/Reel

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