

# GSK52A thru GSK520A

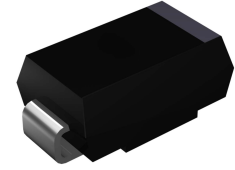
Surface Mount Schottky Rectifiers  
 Reverse Voltage 20V to 200V Forward Current 5A

## Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C



**RoHS**  
COMPLIANT



DO-214AC (SMA)

## Mechanical Data

- Package: DO-214AC (SMA)
- Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Cathode line denotes the cathode end

## Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

## Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	GSK 52A	GSK 53A	GSK 54A	GSK 55A	GSK 56A	GSK 58A	GSK 510A	GSK 515A	GSK 520A	Unit	
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	200	V	
Average Rectified Output Current @ 60Hz Sine Wave, Resistance Load, T <sub>L</sub> (FIG.1)	I <sub>O</sub>	5									A	
Surge (Non-Repetitive) Forward Current @ 60Hz Half-Sine Wave, 1 Cycle, T <sub>A</sub> =25°C	I <sub>FSM</sub>	120									A	
Thermal Resistance, Junction to Ambient <sup>1</sup>	R <sub>θJA</sub>	60									°C/W	
Thermal Resistance, Junction to Lead <sup>1</sup>	R <sub>θJL</sub>	22									°C/W	
Storage Temperature	T <sub>STG</sub>	-55 to +150									°C	
Junction Temperature	T <sub>J</sub>	-55 to +150					-55 to +175					°C

Notes:

1. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0mm x 5.0mm) copper pad areas

## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Condition	GSK 52A	GSK 53A	GSK 54A	GSK 55A	GSK 56A	GSK 58A	GSK 510A	GSK 515A	GSK 520A	Unit	
Maximum Instantaneous Forward Voltage Drop	V <sub>F</sub>	I <sub>FM</sub> =5.0A	0.55			0.67		0.80		0.90		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage @ V <sub>RM</sub> =V <sub>RRM</sub>	I <sub>R</sub>	T <sub>A</sub> =25°C	0.15					0.1					mA
		T <sub>A</sub> =100°C	10					5					

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## Ratings and Characteristic Curves

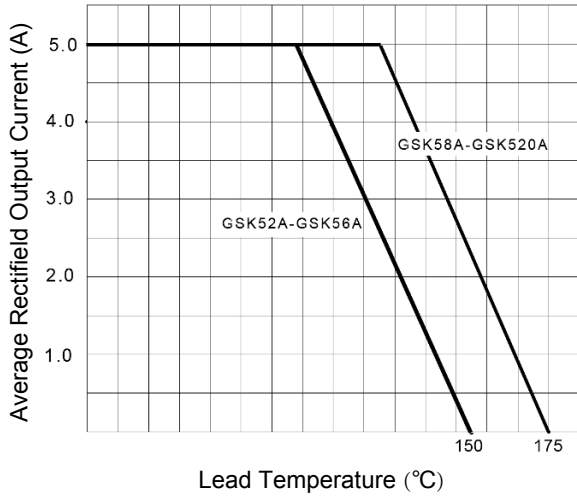


Figure 1.  $I_o$ - $T_L$  Curve

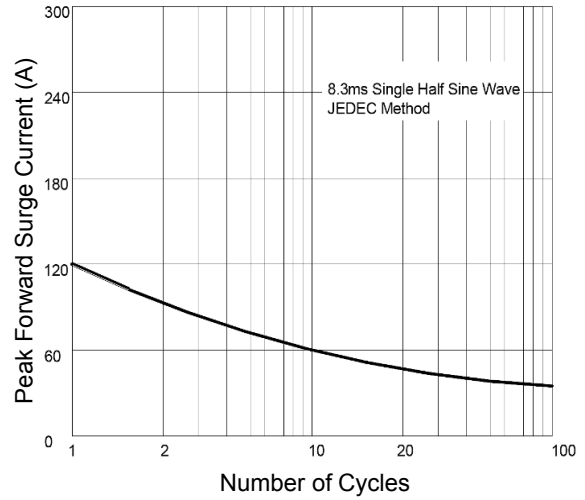


Figure 2. Surge Forward Current Capability

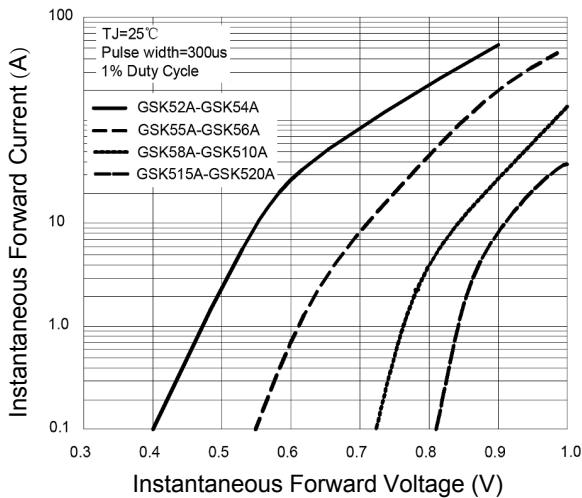


Figure 3. Typical Forward Characteristics

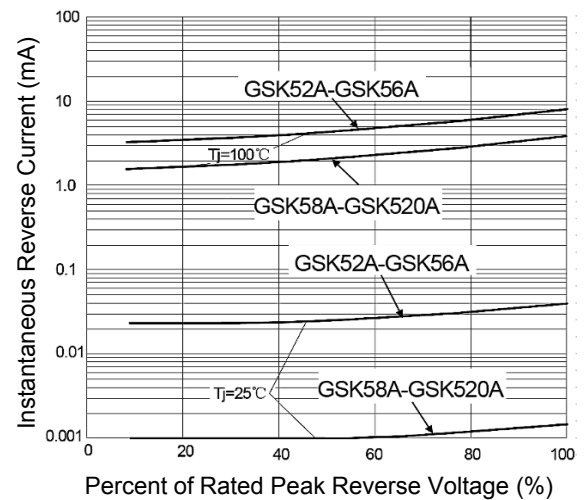
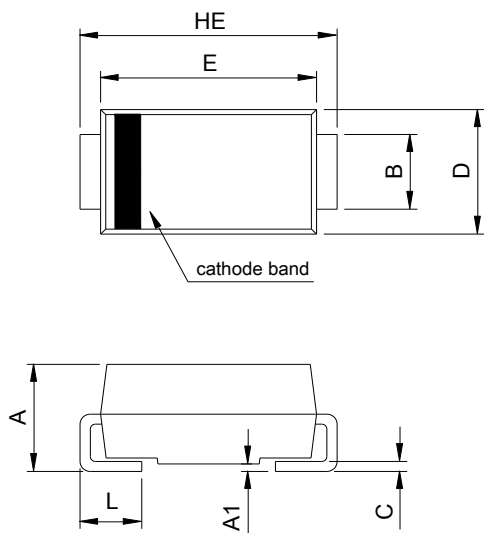


Figure 4. Typical Reverse Characteristics

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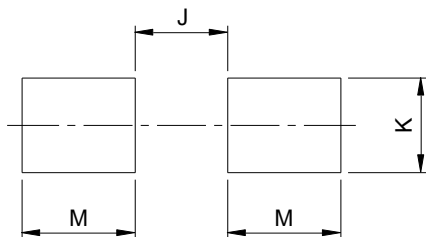
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## Package Outline Dimensions DO-214AC (SMA)



SMA (DO-214AC)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.90	2.30	0.075	0.091
A1	0.00	0.20	0.000	0.008
B	1.25	1.65	0.049	0.065
C	0.15	0.31	0.006	0.012
D	2.35	2.90	0.093	0.114
E	3.99	4.60	0.157	0.181
HE	4.80	5.30	0.189	0.209
L	0.76	1.52	0.030	0.060

## Recommended Pad Layout



Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	2.20	-	0.087
K	1.72	-	0.068	-
M	2.00	-	0.079	-

## Order Information

Device	Package	Marking	Carrier	Quantity
GSK52A	DO-214AC (SMA)	SK52A	Tape & Reel	7,500 Pcs / Reel
GSK53A	DO-214AC (SMA)	SK53A	Tape & Reel	7,500 Pcs / Reel
GSK54A	DO-214AC (SMA)	SK54A	Tape & Reel	7,500 Pcs / Reel
GSK55A	DO-214AC (SMA)	SK55A	Tape & Reel	7,500 Pcs / Reel
GSK56A	DO-214AC (SMA)	SK56A	Tape & Reel	7,500 Pcs / Reel
GSK58A	DO-214AC (SMA)	SK58A	Tape & Reel	7,500 Pcs / Reel
GSK510A	DO-214AC (SMA)	SK510A	Tape & Reel	7,500 Pcs / Reel
GSK515A	DO-214AC (SMA)	SK515A	Tape & Reel	7,500 Pcs / Reel
GSK520A	DO-214AC (SMA)	SK520A	Tape & Reel	7,500 Pcs / Reel

For more information, please contact us at: [inquiry@goodarksemi.com](mailto:inquiry@goodarksemi.com)