GOOD-ARK SEMICONDUCTOR

GSK745B

Schottky Barrier Rectifier

Reverse Voltage 45V Forward Current 7A

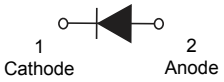
Features

- Low profile package
- Ideal for automated placement
- Low power losses, high efficiency
- Low forward voltage drop
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

DO-214AA (SMB)

Mechanical Data

- Case: DO-214AA (SMB)
- Molding compound meets UL 94 V-0 flammability rating RoHS-compliant, and commercial grade
- Terminals: matte tin plated leads, solderable per J-STD-002 and JESD 22-B102
- Polarity: color band denotes the cathode end



Schematic Diagram

Applications

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

Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Average Rectified Output Current @ 60Hz Sine Wave, Resistance Load, T_L	I_O	7	A
Surge (Non-Repetitive) Forward Current @ 60Hz Half-Sine Wave, 1 Cycle, T_A=25°C	I_{FSM}	200	A
Thermal Resistance, Junction to Ambient[1]	$R_{\theta JA}$	90	°C/W
Thermal Resistance, Junction to Mount[2]	$R_{\theta JM}$	10	°C/W
Junction Temperature	T_J	-55 to +150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Typ	Max	Unit
Instantaneous Forward Voltage Drop	V_F	I_F=3.5A	0.44	-	V
		I_F=7A	0.50	0.57	
DC Reverse Current at Rated DC Blocking Voltage @ V_R=V_{RRM}	I_R	T_A=25°C	0.02	0.1	mA
		T_A=100°C	-	10	

Notes:

1. Free air, mounted on recommended PCB, 2 oz. pad area.
2. Units mounted on 3 cm x 3 cm Aluminum, 2 oz. pad area.

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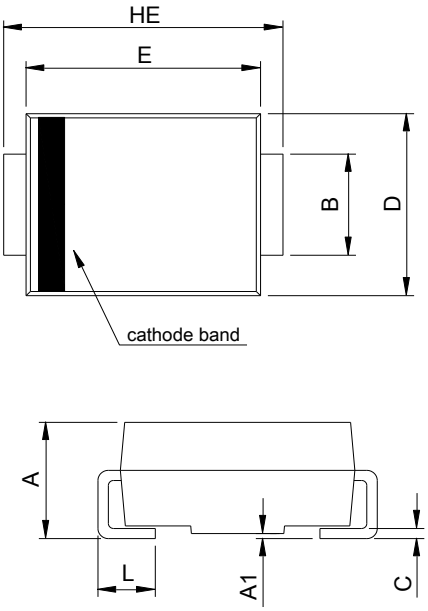
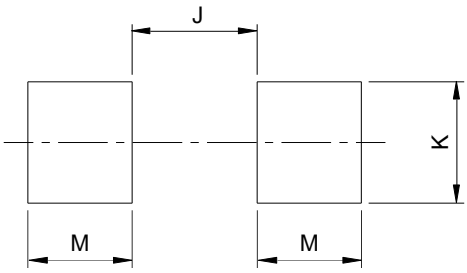
Package Outline Dimensions DO-214AA (SMB)



SMB (DO-214AA)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.95	2.65	0.077	0.104
A1	0.00	0.20	0.000	0.008
B	1.95	2.20	0.077	0.087
C	0.15	0.31	0.006	0.012
D	3.30	3.95	0.130	0.156
E	4.06	4.60	0.160	0.181
HE	5.10	5.60	0.201	0.220
L	0.76	1.60	0.030	0.063

Recommended Pad Layout



SMB Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	2.60	-	0.102
K	2.20	-	0.087	-
M	1.80	-	0.071	-