

Surface Mount Rectifier Diode

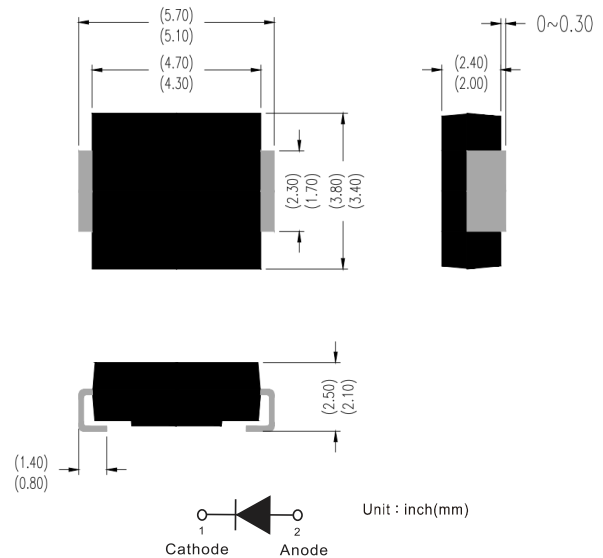
Features

- Glass passivated junction chip
- Ideal for automated placement
- Low forward voltage drop
- High surge current capability
- AEC-Q101 qualified
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Mechanical Data

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

SMB/DO-214AA



Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Unit	S5ABQ	S5BBQ	S5DBQ	S5GBQ	S5JBQ	S5KBQ	S5MBQ
Maximum Repetitive peak reverse voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC Blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	I_O	A	5.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, $T_j=25^\circ\text{C}$	I_{FSM}	A	150						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, $T_j=25^\circ\text{C}$			300						
Current squared time @1ms≤t≤8.3ms $T_j=25^\circ\text{C}$	I^2t	A ² s	94						
Storage temperature	T_{stg}	°C	-55 ~ +150						
Junction temperature	T_j	°C	-55 ~ +150						

Thermal Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Unit	S5ABQ	S5BBQ	S5DBQ	S5GBQ	S5JBQ	S5KBQ	S5MBQ
Typical Thermal resistance	R θ J-A	°C/W	80 ⁽¹⁾						
	R θ J-L		35 ⁽¹⁾						
	R θ J-C		30 ⁽¹⁾						

Note:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Unit	Test Conditions	S5ABQ	S5BBQ	S5DBQ	S5GBQ	S5JBQ	S5KBQ	S5MBQ
Maximum instantaneous forward voltage	V_F	V	$I_{FM}=5.0\text{A}$	1.1						
Maximum DC reverse current at rated DC blocking voltage	I_R	μA	$T_j=25^\circ\text{C}$	5						
			$T_j=125^\circ\text{C}$	100						
Typical junction capacitance	C_j	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	34						

Characteristics (Typical)

