

Surface Mount Schottky Barrier Diode

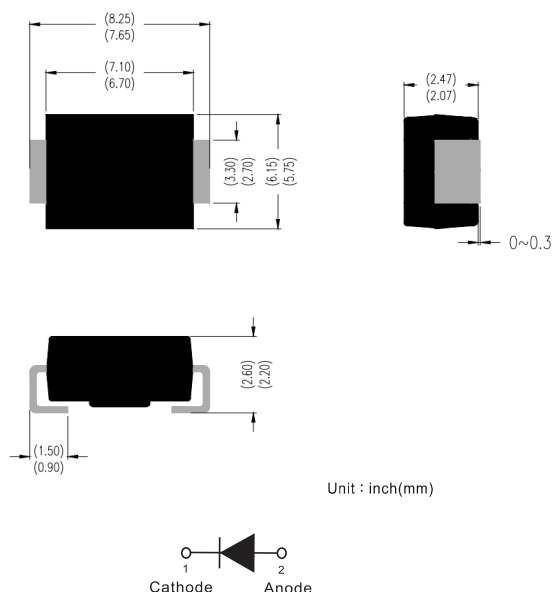
Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low V_F
- Low power losses, high efficiency
- High forward surge capability
- AEC-Q101 qualified
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Mechanical Data

- **Package:** DO-214AB (SMC)
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end

DO-214AB (SMC)



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

Parameter	Symbol	Unit	SS54LCQ	SS545LCQ	SS56LCQ	SS510LCQ
Repetitive peak reverse voltage	V_{RRM}	V	40	45	60	100
Average rectified output current @60Hz sine wave, resistance load, TL (FIG.1)	I_O	A	5.0			
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, $T_a=25^\circ\text{C}$	I_{FSM}	A	120			
Storage temperature	T_{stg}	$^\circ\text{C}$	-55 ~+150			
Junction temperature	T_j	$^\circ\text{C}$	-55 ~+150			

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

Parameter	Symbol	Unit	Test Conditions	SS54LCQ	SS545LCQ	SS56LCQ	SS510LCQ
Maximum instantaneous forward voltage drop per diode	V_F	V	$I_{FM}=5.0\text{A}$	0.45		0.50	0.70
Maximum DC reverse current at rated DC blocking voltage per diode @ $V_{RM}=V_{RRM}$	I_{RRM}	mA	$T_a=25^\circ\text{C}$	0.5			0.1
			$T_a=100^\circ\text{C}$	50			20

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

Parameter	Symbol	Unit	SS54LCQ	SS545LCQ	SS56LCQ	SS510LCQ
Thermal resistance	$R_{\theta J-A}$	$^\circ\text{C/W}$	65 ⁽¹⁾			
	$R_{\theta J-L}$		16 ⁽¹⁾			
	$R_{\theta J-C}$		15 ⁽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

Characteristics (Typical)

