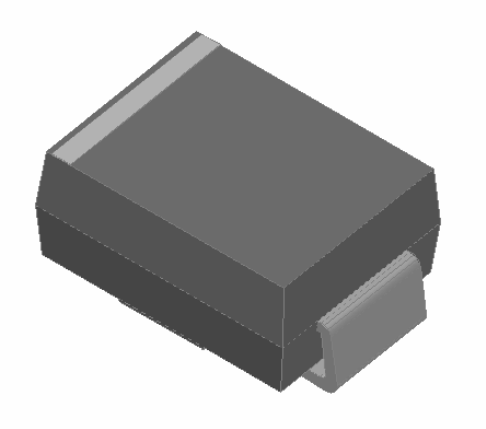
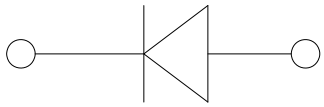
Surface Mount Schottky Rectifier





Features

- Guard ring for overvoltage protection
- Low power losses
- Extremely fast switching
- High forward surge capability
- High frequency operation
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Part no. with suffix “Q” means AEC-Q101 qualified

Typical Applications

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

Mechanical Data

- **Package**: DO-214AA (SMB)
  Molding compound meets UL 94 V-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

■Maximum Ratings (T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	SS56BQ
Device marking code			SS56B
Repetitive peak reverse voltage	V_{RRM}	V	60
Maximum RMS voltage	V_{RMS}	V	42
Maximum DC blocking voltage	V_{DC}	V	60
Maximum average forward rectified current at T_L (Fig.1)	I_O	A	5.0
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T_J=25	I_{FSM}	A	120
Voltage rate of change (rated V_R)	dV/dt	V/μs	10000
Storage temperature	T_{stg}		-55 ~+150
Junction temperature	T_J		-55 ~+150

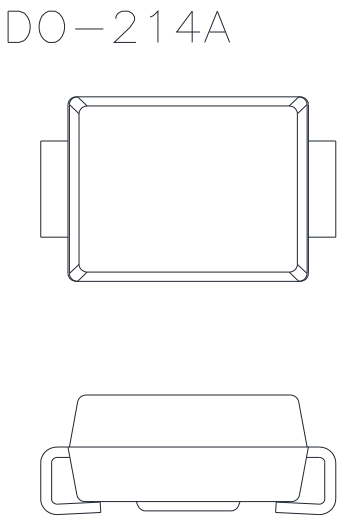
■Electrical Characteristics T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	TEST CONDITIONS		TYP	MAX	UNIT
Instantaneous forward voltage	V_F	I_F=5A	T_J=25	0.6	0.7	V
			T_J=125	0.54	0.63	
Reverse current	I_R	Rated V_R	T_J=25	8	100	μA
			T_J=125	-	20	mA
Typical junction capacitance	C_J	V_R=4V,f=1MHz		215	-	pF

■**Thermal Characteristics** T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	SS56BQ
Thermal resistance	$R_{\theta J-A}$(1)	/W	

■ Outline Dimensions



DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.05	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.05	0.20
H	0.15	0.31

■ Suggested pad layout

DO-214AA(SMB)	
Dim	Millimeters
P1	6.8
P2	4.3
P3	1.8
Q1	2.5
Q2	2.3

Disclaimer

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