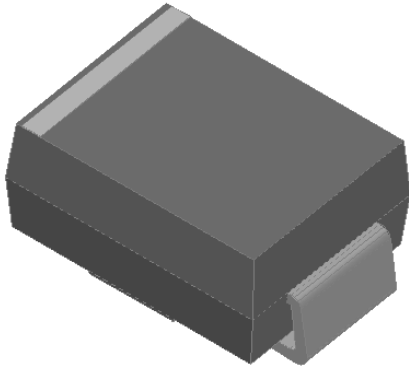


Surface Mount Schottky Rectifier

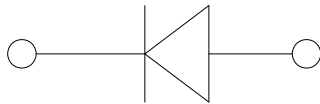


Features

- 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	SS515BQ	SS520BQ
Device marking code			SS515B	SS520B
Repetitive peak reverse voltage	V_{RRM}	V	150	200
Maximum RMS voltage	V_{RMS}	V	105	140
Maximum DC blocking voltage	V_{DC}	V	150	200
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/ μ s	10000	
Storage temperature	T_{stg}		-55 ~+175	
Junction temperature	T_J		-55 ~+175	

Electrical Characteristics $T_a=25$ Unless otherwise specified

PARAMETER	SYMBOL	TEST CONDITIONS	TYP	MAX	UNIT	
Instantaneous forward voltage	V_F	$I_F=5A$	$T_J=25$	0.82	0.9	V
			$T_J=125$	0.7	0.8	
Reverse current	I_R	Rated V_R	$T_J=25$	-	1	μ A
			$T_J=125$	-	150	
Typical junction capacitance	C_J	$V_R=4V, f=1MHz$	100	-	pF	



SS515BQ THRU SS520BQ

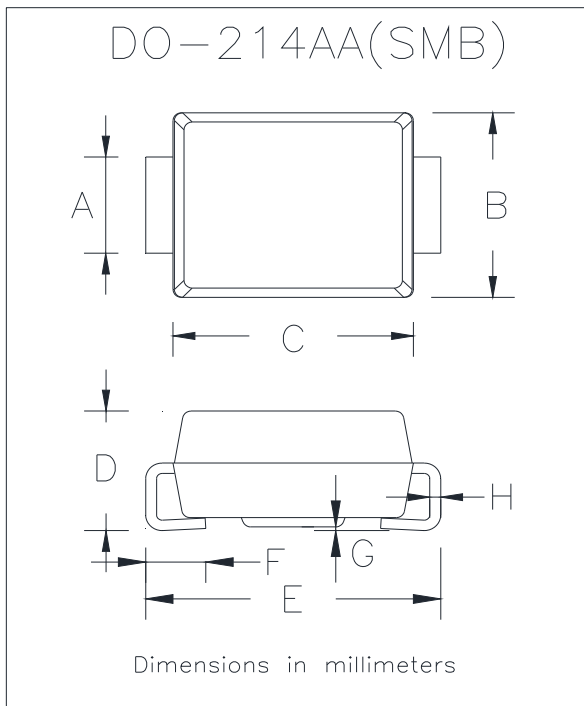
Thermal Characteristics $T_a=25$ Unless otherwise specified

PARAMETER	SYMBOL	UNIT	SS515BQ	SS520BQ
Thermal resistance	$R_{JA(1)}$	/W	63 ¹⁾	
	$R_{JL(1)}$		22 ¹⁾	



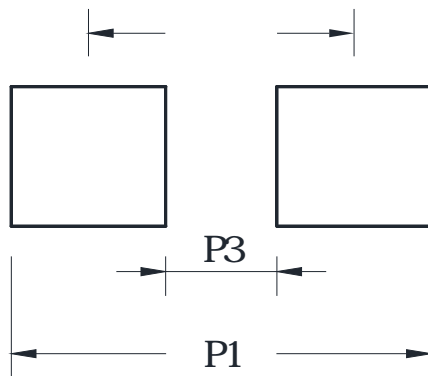
SS515BQ THRU SS520BQ

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



SS515BQ THRU SS520BQ

Disclaimer

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