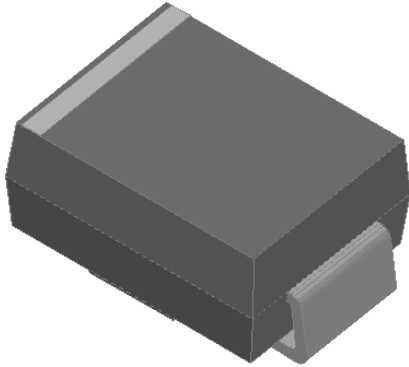


## Surface Mount Schottky Rectifier

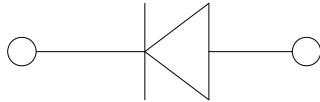


### Features

- 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<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS 52BQ	SS 53BQ	SS 54BQ	SS 55BQ	SS 56BQ	SS 58BQ	SS 510BQ	SS 515BQ	SS 520BQ
Device marking code			SS52B	SS53B	SS54B	SS55B	SS56B	SS58B	SS510B	SS515B	SS520B
Repetitive peak reverse voltage	V <sub>RRM</sub>	V	20	30	40	50	60	80	100	150	200
Average rectified output current @60Hz sine wave, resistance load, T <sub>L</sub> (FIG.1)	I <sub>O</sub>	A	5.0								
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, Ta=25°C	I <sub>FSM</sub>	A	120								
Storage temperature	T <sub>stg</sub>	°C	-55 ~+150								
Junction temperature	T <sub>J</sub>	°C	-55~+125				-55 ~+150				

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SS 52BQ	SS 53BQ	SS 54BQ	SS 55BQ	SS 56BQ	SS 58BQ	SS 510BQ	SS 515BQ	SS 520BQ
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =5.0A	0.60			0.70		0.85		0.90	
Maximum DC reverse current at rated DC blocking voltage per diode @ V <sub>RM</sub> =V <sub>RRM</sub>	I <sub>RRM</sub>	mA	T <sub>a</sub> =25°C	0.5				0.1				
			T <sub>a</sub> =100°C	10				5				
Typical junction capacitance	C <sub>J</sub>	pF	V <sub>R</sub> =4V,f=1MHZ	265			210		150		100	



# SS52BQ THRU SS520BQ

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS 52BQ	SS 53BQ	SS 54BQ	SS 55BQ	SS 56BQ	SS 58BQ	SS 510BQ	SS 515BQ	SS 520BQ
Thermal resistance	R <sub>θJ-A</sub> <sup>(1)</sup>	°C/W	63 <sup>(1)</sup>								
	R <sub>θJ-L</sub> <sup>(1)</sup>		23 <sup>(1)</sup>								

Note:  
 (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

## ■ Characteristics(Typical)

Fig.1:I<sub>O</sub>-T<sub>L</sub> Curve

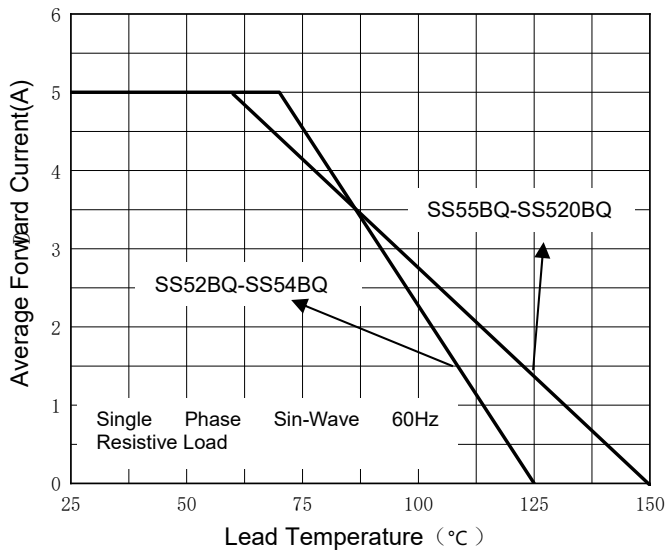


Fig.2:Surge Forward Current Capability

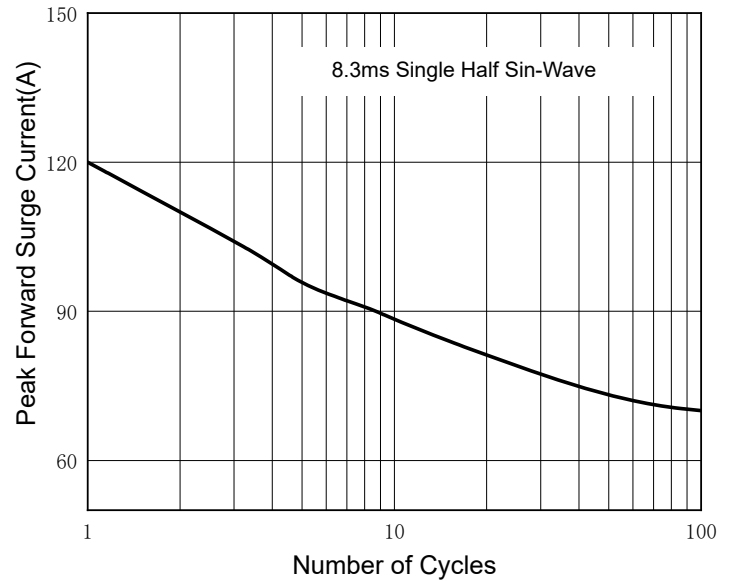


Fig.3:Forward Voltage

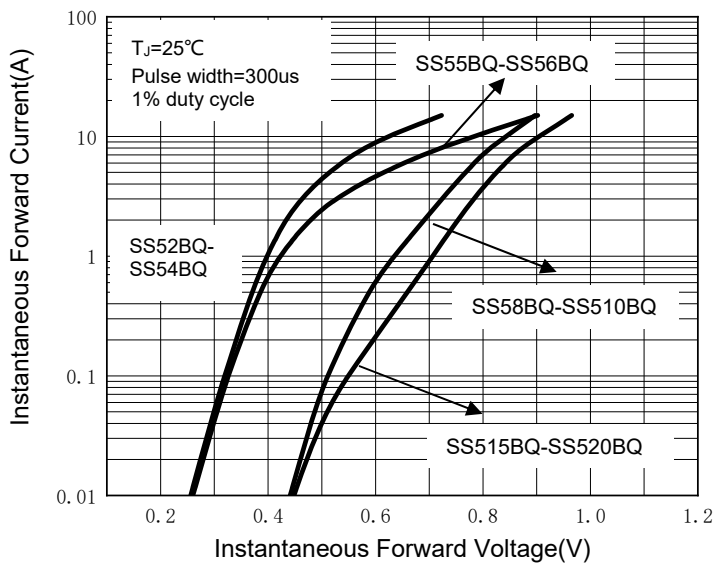
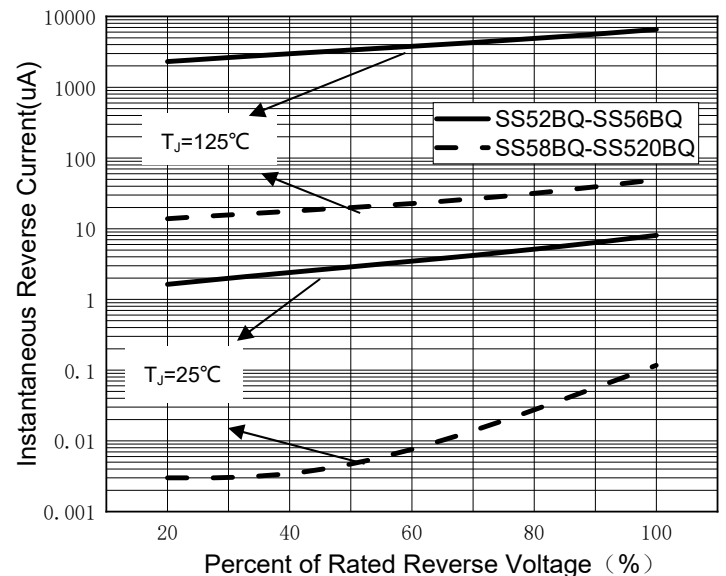


Fig.4:Typical Reverse Characteristics



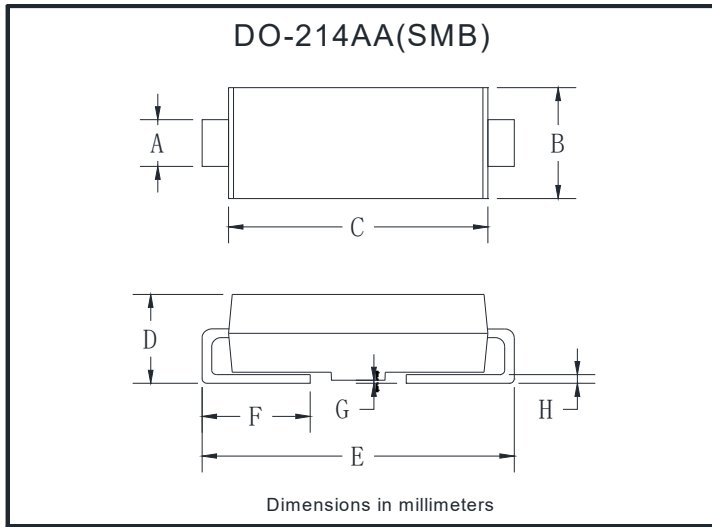


# SS52BQ THRU SS520BQ

## ■ Ordering Information (Example)

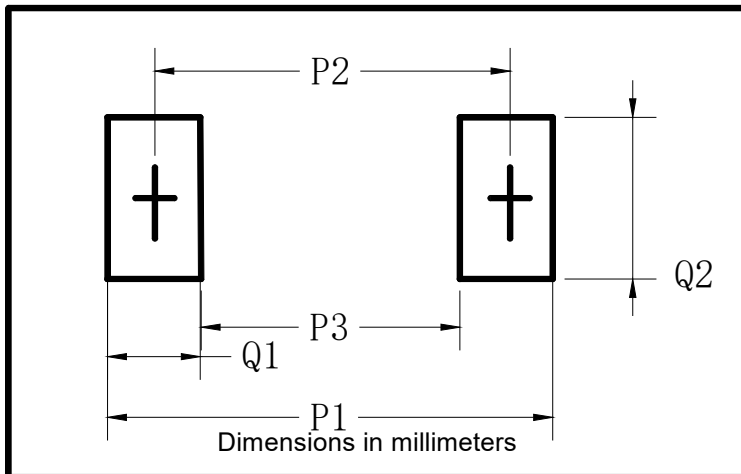
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SS52BQ-SS520BQ	F1	Approximate 0.1003	3000	6000	48000	13" reel

## ■ Outline Dimensions



DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.25	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.10	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



## SS52BQ THRU SS520BQ

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