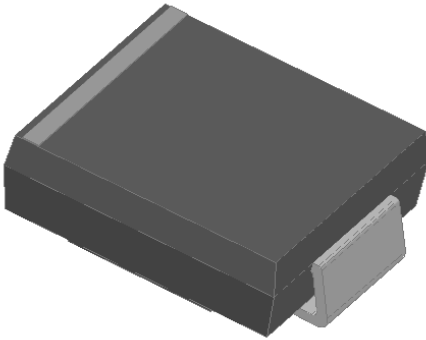


## Surface Mount Schottky Rectifier

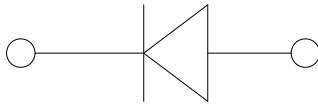


### Features

- Guardring 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-214AB (SMC)  
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 ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS515Q	SS520Q
Device marking code			SS515	SS520
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, $T_J=25^\circ\text{C}$	$I_{FSM}$	A	120	
Voltage rate of change (rated $V_R$ )	$dV/dt$	V/ $\mu\text{s}$	10000	
Storage temperature	$T_{sig}$	$^\circ\text{C}$	-55 ~ +175	
Junction temperature	$T_J$	$^\circ\text{C}$	-55 ~ +175	

### ■ Electrical Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

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



# SS515Q THRU SS520Q

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

PARAMETER	SYMBOL	UNIT	SS515Q	SS520Q
Thermal resistance	R <sub>θJ-A</sub> (1)	°C/W	47 <sup>(1)</sup>	
	R <sub>θJ-L</sub> (1)		13 <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

## ■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SS515Q~SS520Q	F1	Approximate 0.251	3000	42000	13" reel

## ■ Characteristics (Typical)

Fig.1:Forward Current Derating Curve

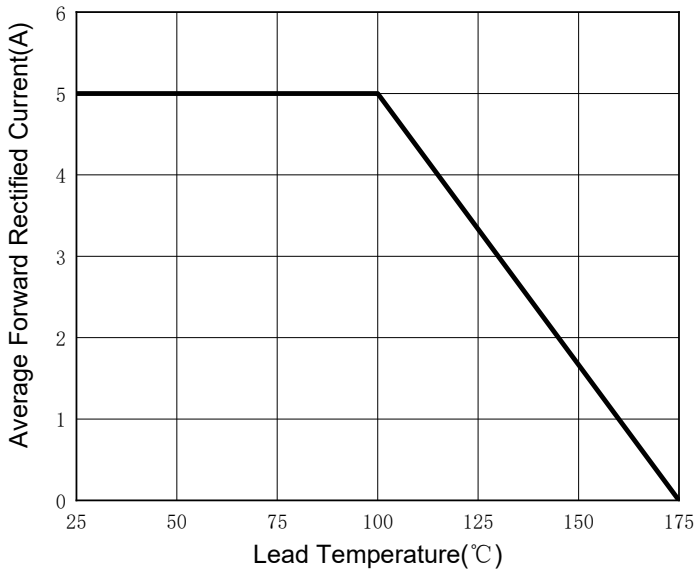


Fig.2:Maximum Non-Repetitive Peak Forward Surge Current

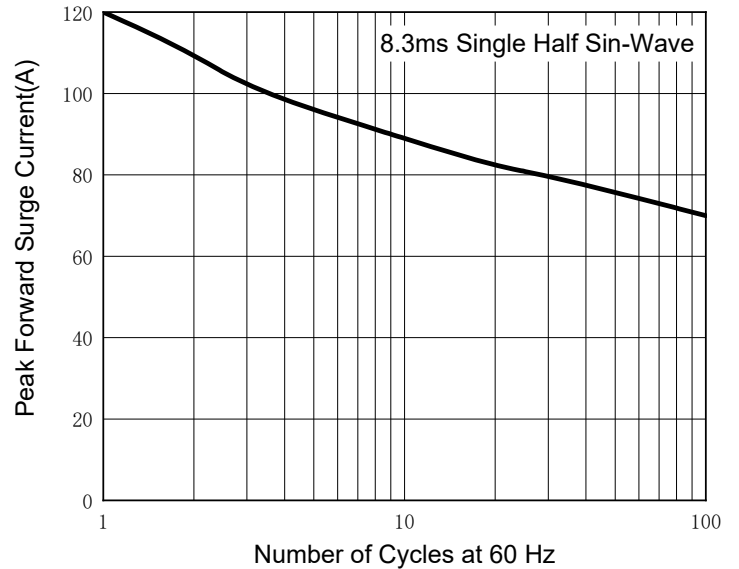


Fig.3:Typical Instantaneous Forward Characteristics

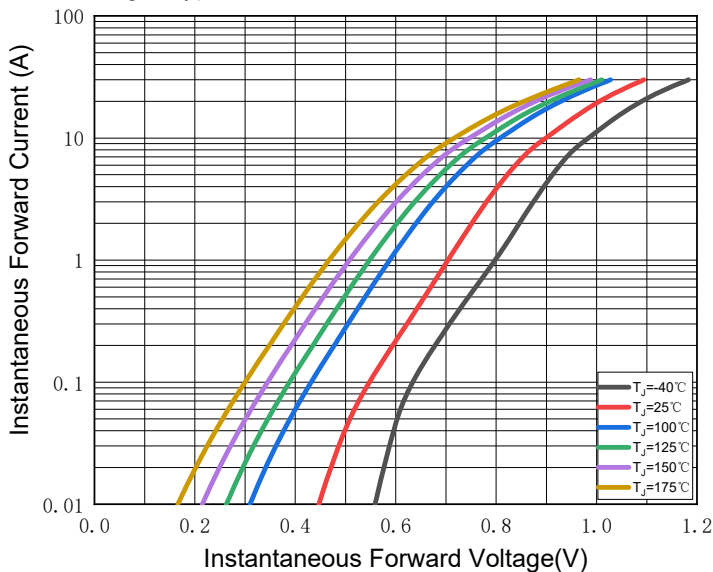
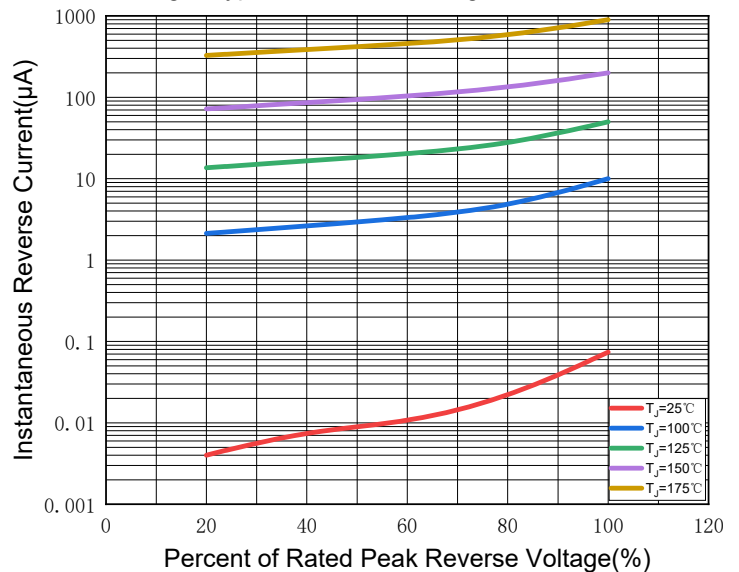


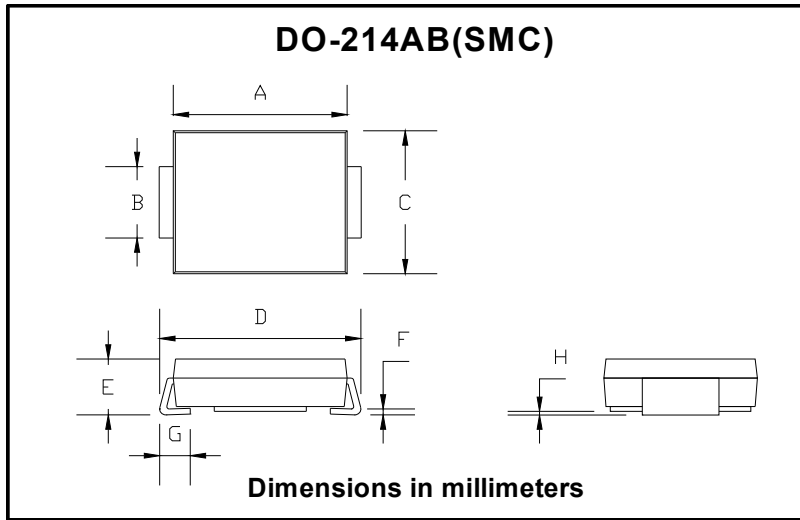
Fig.4:Typical Reverse Leakage Characteristics





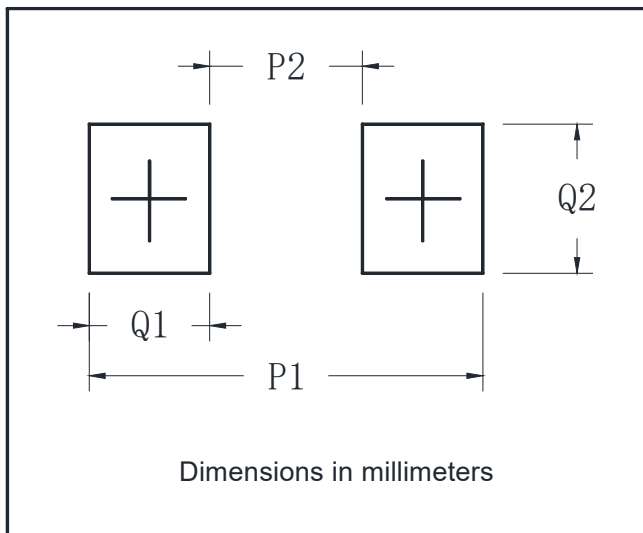
# SS515Q THRU SS520Q

## ■ Outline Dimensions



DO-214AB (SMC)		
Dim	Min	Max
A	6.60	7.11
B	2.85	3.27
C	5.59	6.22
D	7.75	8.13
E	1.99	2.61
F	0.15	0.31
G	0.76	1.52
H	0.05	0.20

## ■ Suggested pad layout



Dim	Typ
P1	9.9
P2	3.84
Q1	3.03
Q2	3.82



## SS515Q THRU SS520Q

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### Disclaimer

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