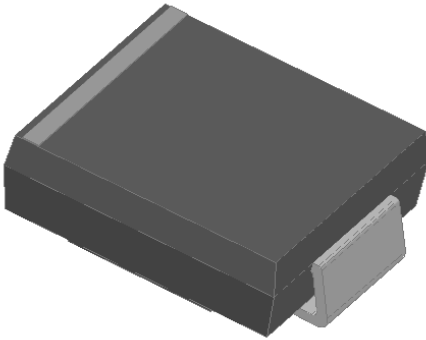


Surface Mount Schottky Rectifier

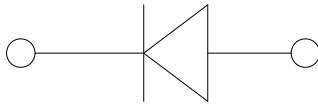


Features

- 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/ μs	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	μA
			$T_J=125^\circ\text{C}$	-	150	
Typical junction capacitance	C_J	$V_R=4V, f=1\text{MHz}$		100	-	pF



SS515Q THRU SS520Q

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS515Q	SS520Q
Thermal resistance	R _{θJ-A} (1)	°C/W	47 ⁽¹⁾	
	R _{θJ-L} (1)		13 ⁽¹⁾	

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

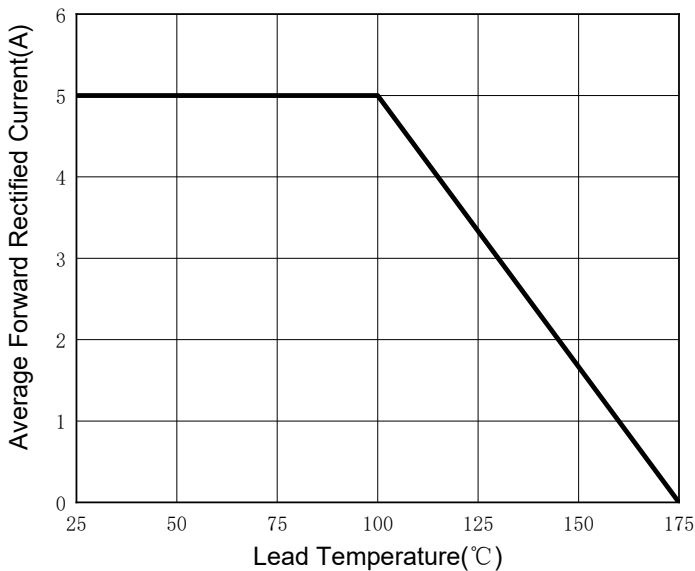


Fig.2: Maximum Non-Repetitive Peak Forward Surge Current

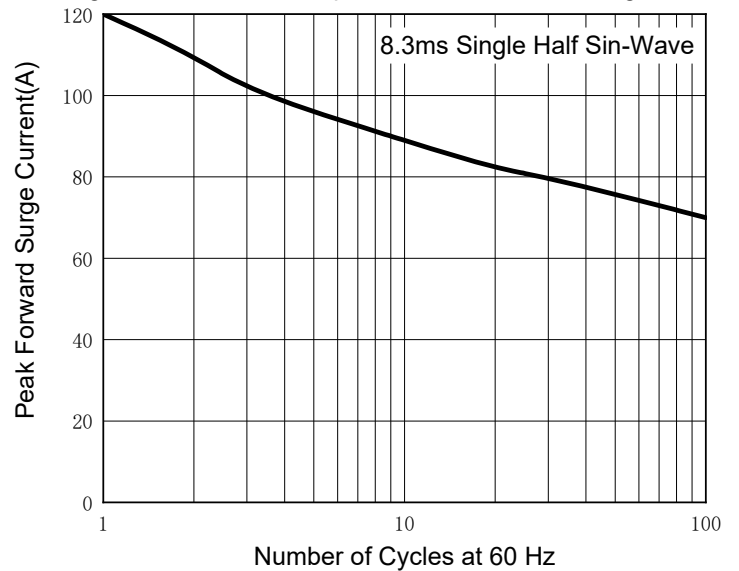


Fig.3: Typical Instantaneous Forward Characteristics

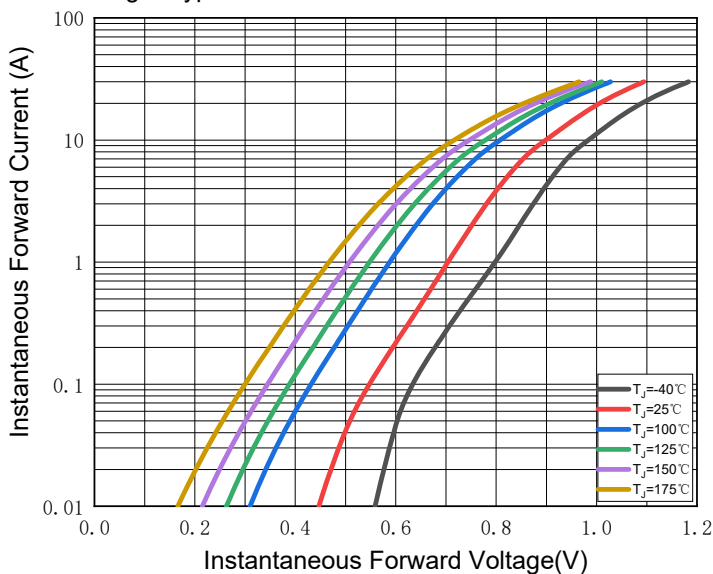
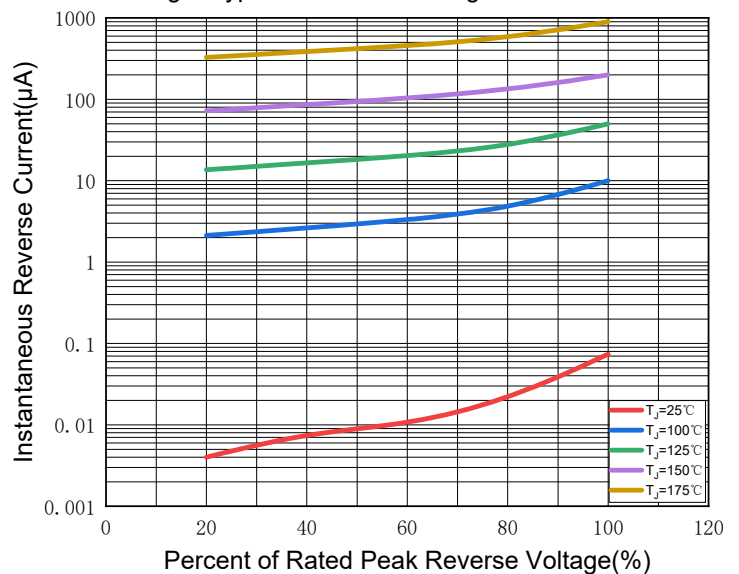


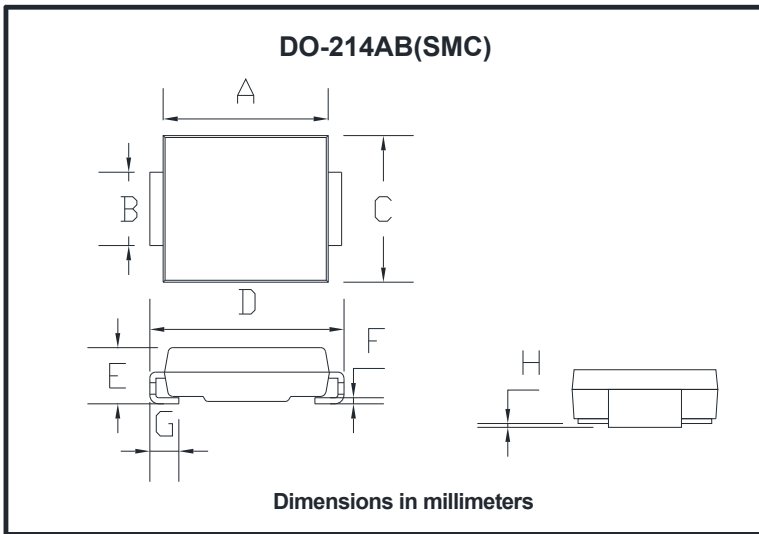
Fig.4: Typical Reverse Leakage Characteristics





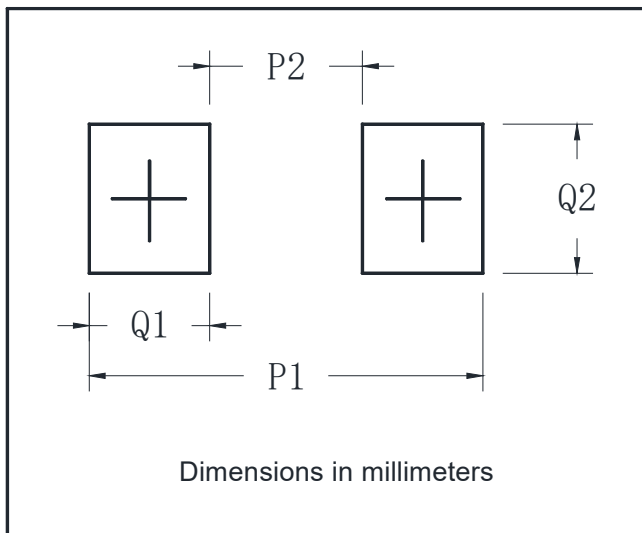
SS515Q THRU SS520Q

■ 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

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with automotive electronics, are not designed for use in medical, lifesaving, lifesustaining, or military, Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.