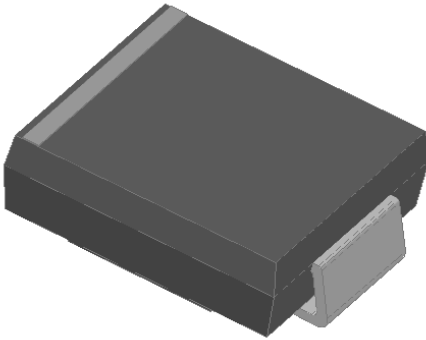


## Surface Mount Schottky Rectifier

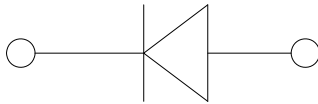


### Features

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

PARAMETER	SYMBOL	UNIT	SS56Q
Device marking code			SS56
Repetitive peak reverse voltage	V <sub>RRM</sub>	V	60
Maximum RMS voltage	V <sub>RMS</sub>	V	42
Maximum DC blocking voltage	V <sub>DC</sub>	V	60
Maximum average forward rectified current at T <sub>L</sub> (Fig.1)	I <sub>O</sub>	A	5.0
Surge(non-repetitive)forward current @60Hz half-sine wave, 1 cycle, T <sub>J</sub> =25°C	I <sub>FSM</sub>	A	120
Voltage rate of change (rated V <sub>R</sub> )	dV/dt	V/μs	10000
Storage temperature	T <sub>stg</sub>	°C	-55 ~+150
Junction temperature and storage temperature	T <sub>J</sub>	°C	-55 ~+150

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

PARAMETER	SYMBOL	TEST CONDITIONS	TYP	MAX	UNIT	
Instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =5A	T <sub>J</sub> =25°C	0.6	0.7	V
			T <sub>J</sub> =125°C	0.54	0.63	
Reverse current	I <sub>R</sub>	Rated V <sub>R</sub>	T <sub>J</sub> =25°C	9	100	μA
			T <sub>J</sub> =125°C	-	20	mA
Typical junction capacitance	C <sub>J</sub>	V <sub>R</sub> =4V,f=1MHz	215	-	pF	



# SS56Q

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

PARAMETER	SYMBOL	UNIT	SS56Q
Thermal Resistance	R <sub>θJ-A</sub>	°C/W	48 <sup>1)</sup>
	R <sub>θJ-L</sub>		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
SS56Q	F1	Approximate 0.251	3000	42000	13" reel

## ■ Characteristics (Typical)

Fig.1: Forward Current Derating Curve

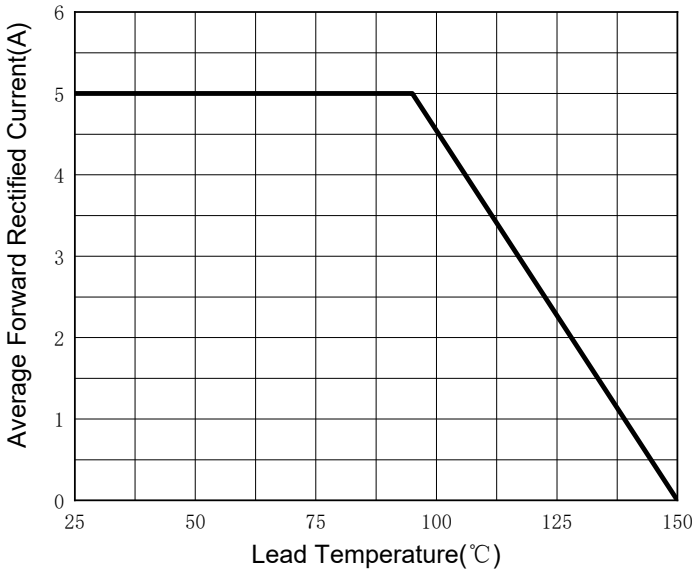


Fig.2: Maximum Non-Repetitive Peak Forward Surge Current

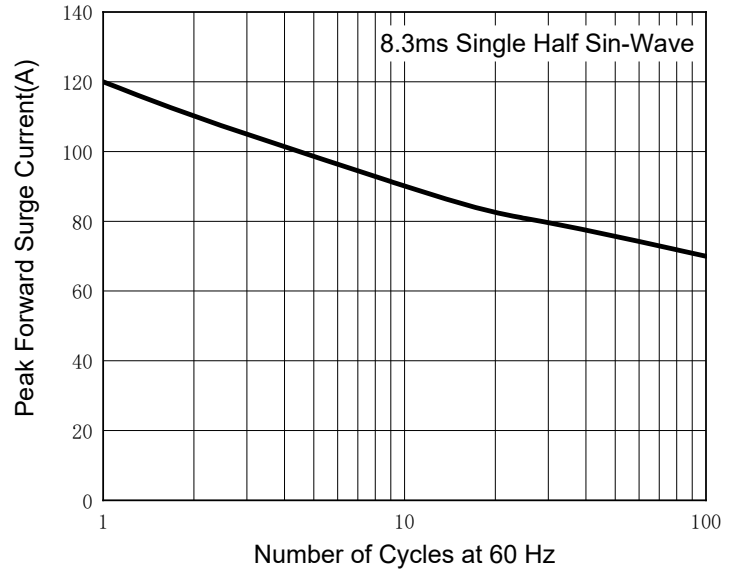


Fig.3: Typical Instantaneous Forward Characteristics

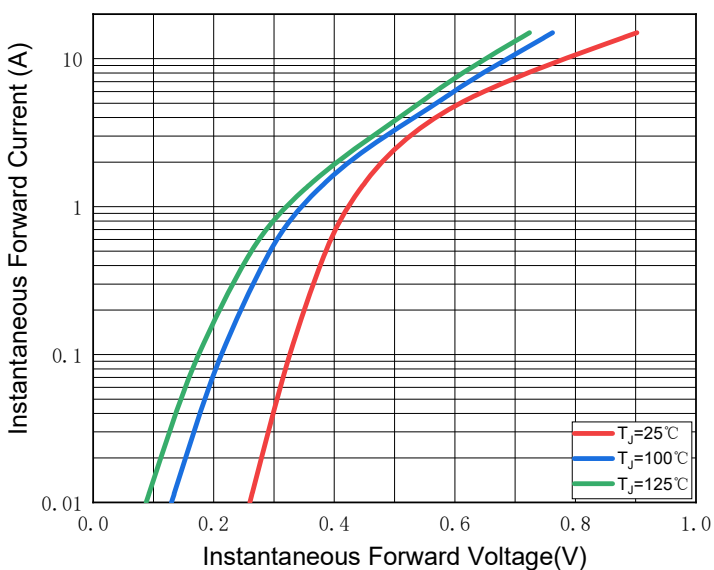
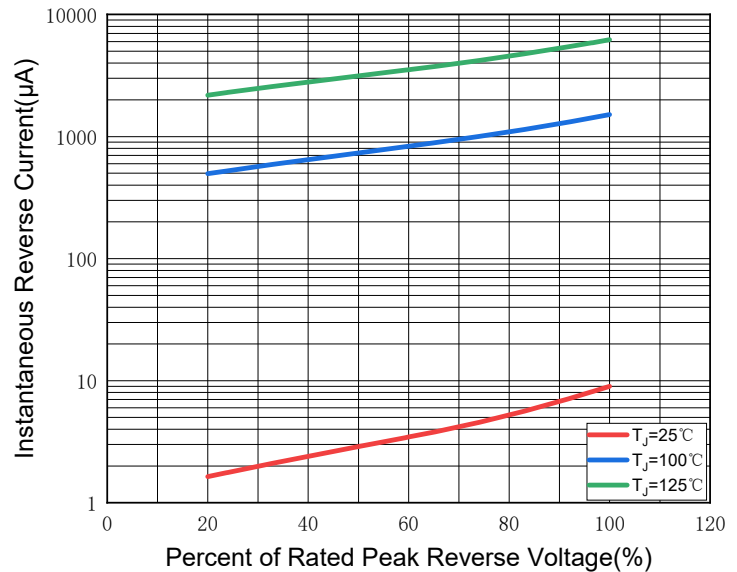
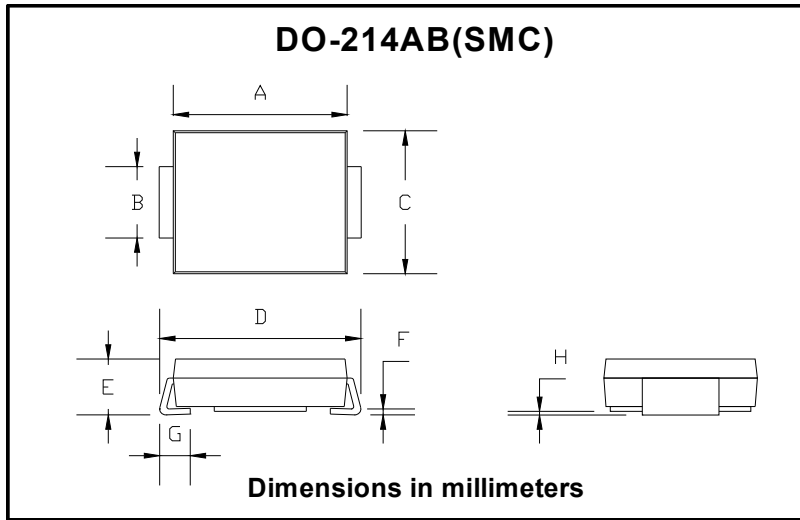


Fig.4: Typical Reverse Leakage Characteristics

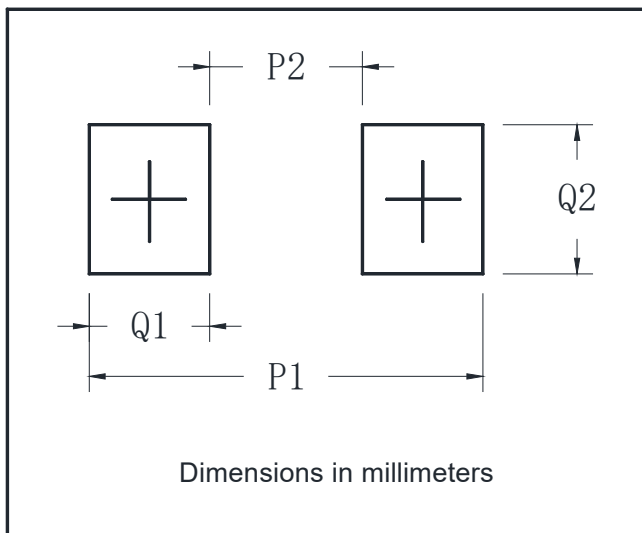


## ■ Outline Dimensions



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



## SS56Q

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