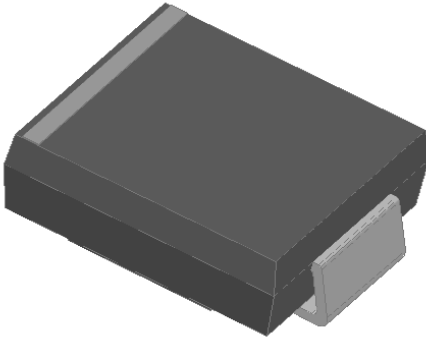


Surface Mount Schottky Rectifier

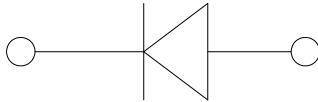


Features

- 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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS 52Q	SS 53Q	SS 54Q	SS 55Q	SS 56Q	SS 58Q	SS 510Q	SS 515Q	SS 520Q
Device marking code			SS52	SS53	SS54	SS55	SS56	SS58	SS510	SS515	SS520
Repetitive peak reverse voltage	V _{RRM}	V	20	30	40	50	60	80	100	150	200
Average rectified output current @60Hz sine wave, resistance load, T _L (FIG.1)	I _O	A	5.0								
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T _a =25°C	I _{FSM}	A	120								
Storage temperature	T _{stg}	°C	-55 ~+150								
Junction temperature	T _J	°C	-55~+125				-55 ~+150				

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SS 52Q	SS 53Q	SS 54Q	SS 55Q	SS 56Q	SS 58Q	SS 510Q	SS 515Q	SS 520Q
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =5.0A	0.60			0.70		0.85		0.90	
Maximum DC reverse current at rated DC blocking voltage per diode @ V _{RM} =V _{RRM}	I _{RRM}	mA	Ta=25℃	0.5				0.1				
			Ta=100℃	10				5				
Typical junction capacitance	C _J	pF	V _R =4V,f=1MHz	265			210		150		100	



SS52Q THRU SS520Q

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

PARAMETER		SYMBOL	UNIT	SS52Q	SS53Q	SS54Q	SS55Q	SS56Q	SS58Q	SS510Q	SS515Q	SS520Q
Thermal Resistance	Junction to ambient	$R_{\theta JA}$	$^{\circ}\text{C/W}$	47 ⁽¹⁾								
	Junction to lead	$R_{\theta JL}$		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)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SS52Q~SS520Q	F1	Approximate 0.251	3000	6000	42000	13" reel

■ Characteristics (Typical)

Fig.1: I_O - T_L Curve

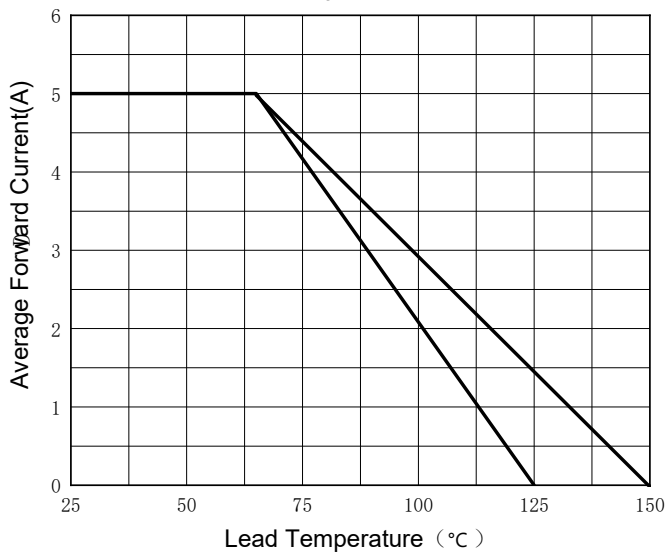


Fig.2: Surge Forward Current Capability

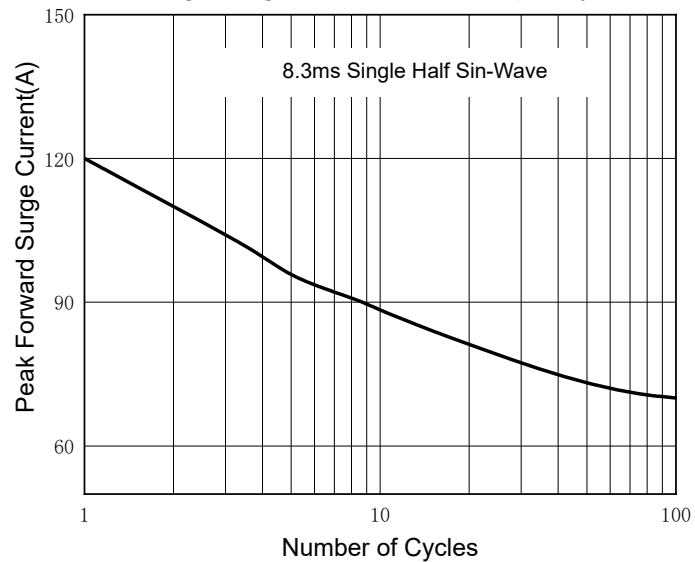


Fig.3: Forward Voltage

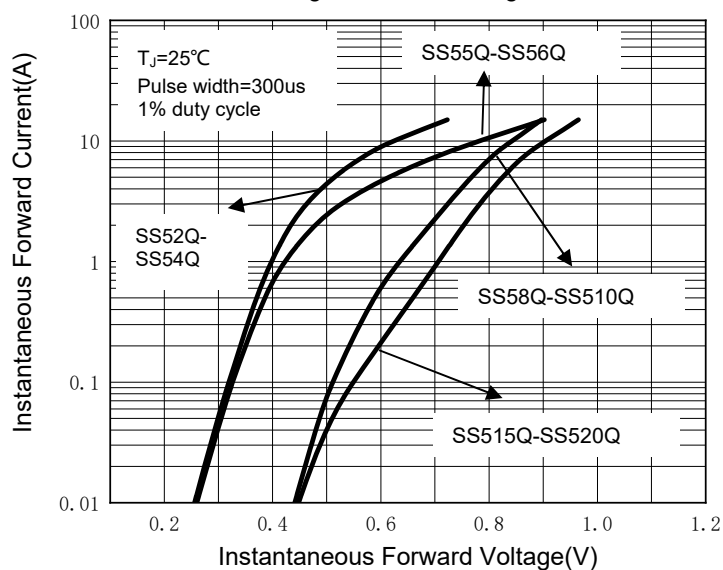
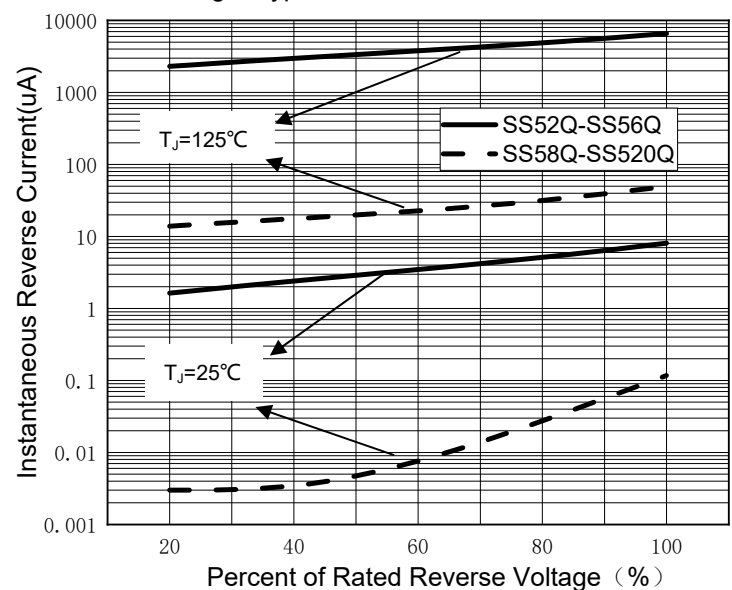


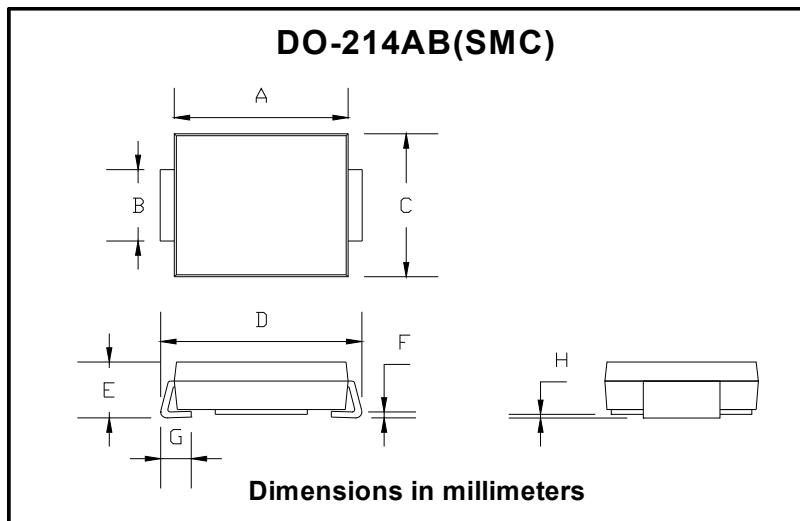
Fig.4: Typical Reverse Characteristics





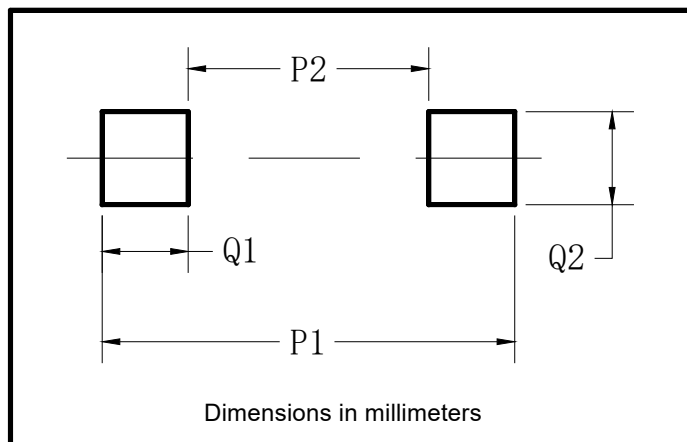
SS52Q THRU SS520Q

■ 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	0.10	0.20

■ Suggested pad layout



Dim	Typ
P1	9.9
P2	3.84
Q1	3.03
Q2	3.82



SS52Q THRU SS520Q

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