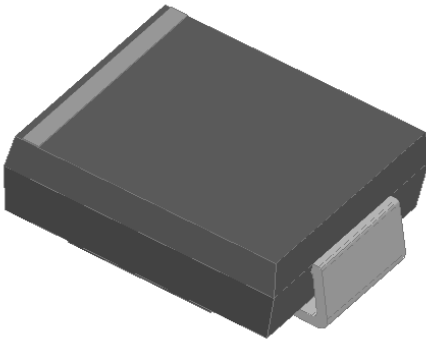


Surface Mount Schottky Rectifier

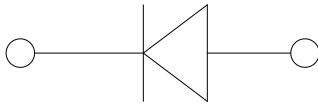


Features

- Guardring for overvoltage protection
- Low power loss
- 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
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end

■ Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS82Q	SS84Q	SS86Q	SS810Q	SS820Q
Device marking code			SS82	SS84	SS86	SS810	SS820
Repetitive Peak Reverse Voltage	V_{RRM}	V	20	40	60	100	200
Average Rectified Output Current @60Hz sine wave, Resistance load, T_L (FIG.1)	I_O	A	8.0				
Surge(Non-repetitive)Forward Current @60Hz Half-sine wave, 1 cycle, Ta=25°C	I_{FSM}	A	150				
Storage Temperature	T_{stg}	°C	-55 ~+150				
Junction Temperature	T_J	°C	-55~+125		-55 ~+150		

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SS82Q	SS84Q	SS86Q	SS810Q	SS820Q
Maximum instantaneous forward voltage drop per diode	V_F	V	$I_{FM}=8.0A$	0.55	0.60	0.70	0.85	0.95
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	mA	Ta=25°C	0.2			0.1	
			Ta=100°C	20			5.0	
Typical junction capacitance	C_J	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C.	482		334	270	166



SS82Q THRU SS820Q

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

PARAMETER		SYMBOL	UNIT	SS82Q	SS84Q	SS86Q	SS810Q	SS820Q
Thermal Resistance	Between junction and ambient	R _{θJ-A}	°C/W	45 ⁽¹⁾				
	Between junction and lead	R _{θJ-L}		12 ⁽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
SS82Q-SS820Q	F1	Approximate 0.254	3000	6000	42000	13" reel

■ Characteristics (Typical)

FIG.1: Io-TL Curve

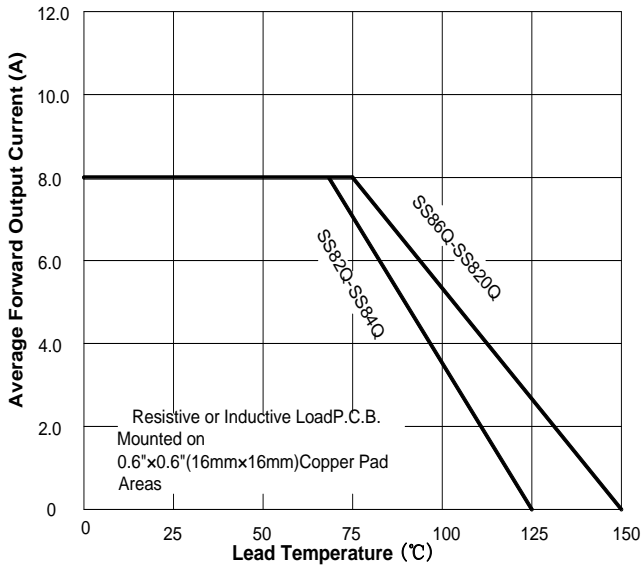


FIG.2: Forward Surge Current Capability

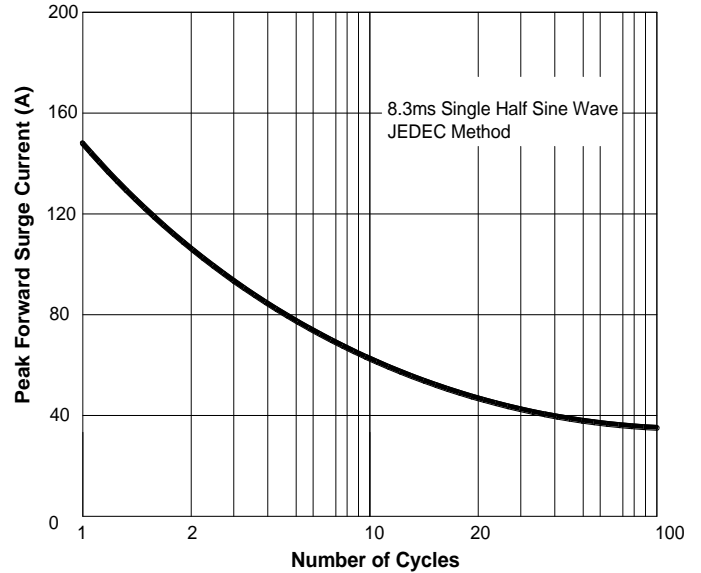


FIG.3: Forward Voltage

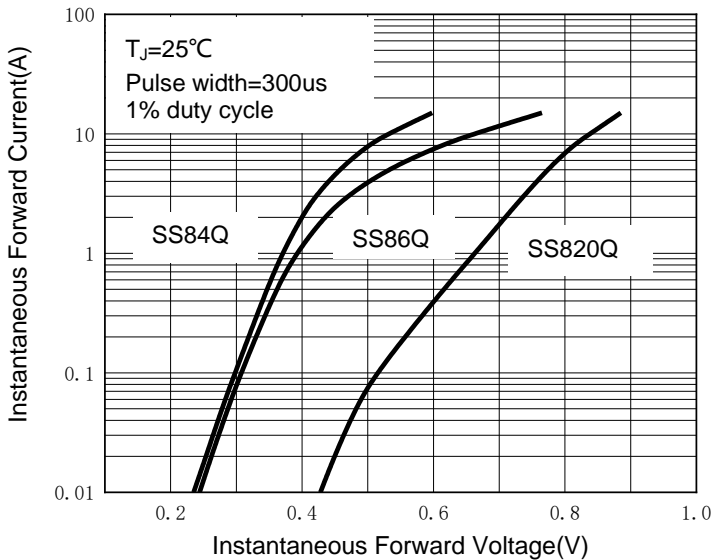
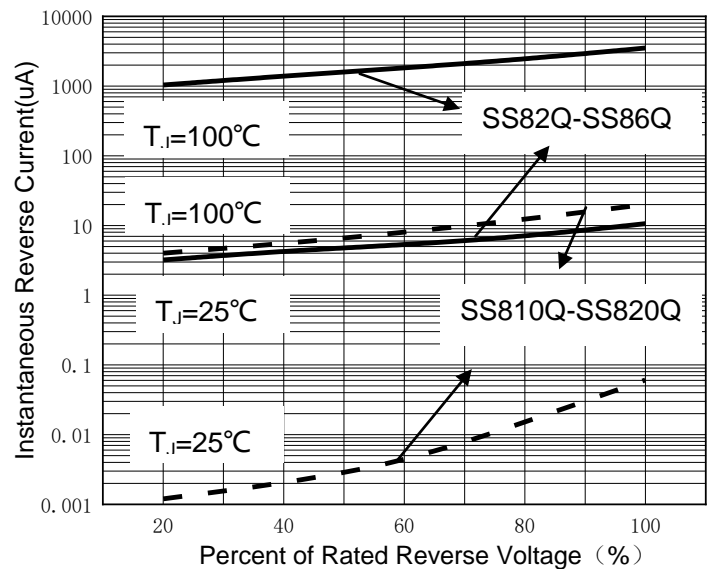
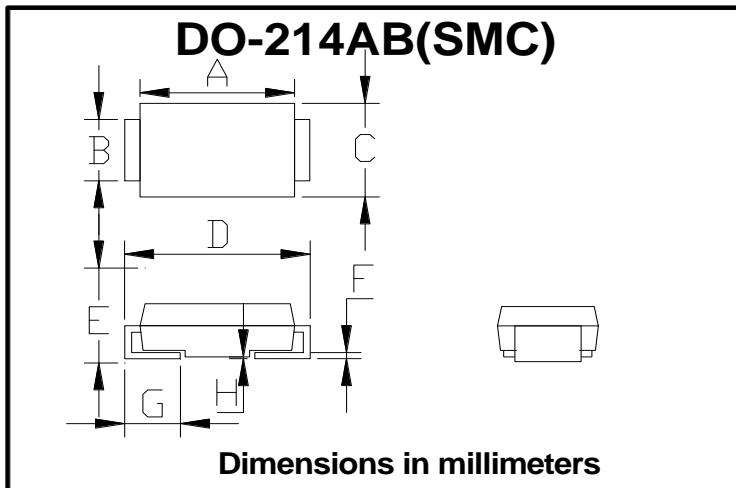


FIG.4: Typical Reverse Characteristics



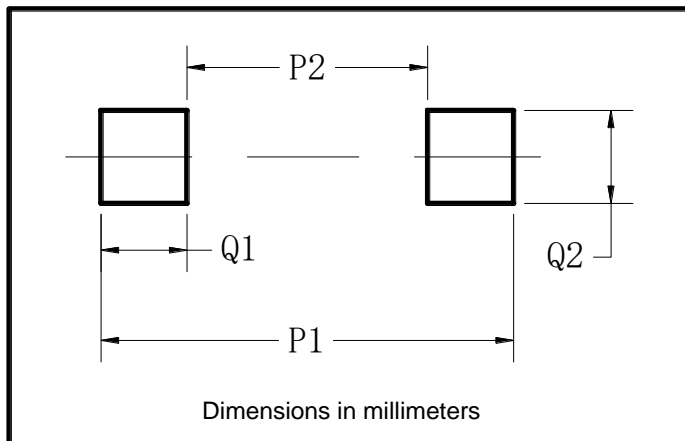


■ Outline Dimensions



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	0.10	0.20

■ Suggested pad layout



DO-214AB (SMC)	
Dim	Min
P1	9.9
P2	3.84
Q1	3.03
Q2	3.82



SS82Q THRU SS820Q

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