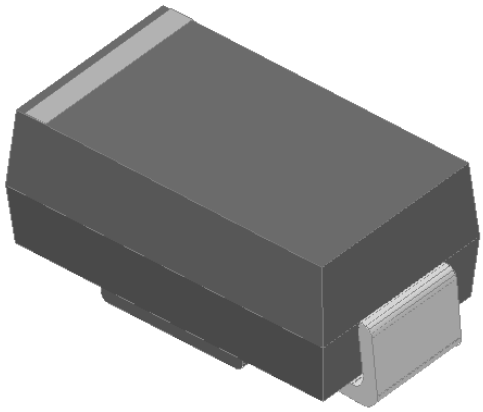
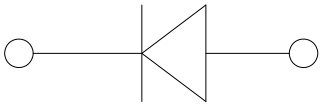
Surface Mount Schottky Rectifier





Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- 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-214AC (SMA)
  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℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS						
			12AQ	13AQ	14AQ	15AQ	16AQ	18AQ	110AQ
Device marking code			SS						
			12A	13A	14A	15A	16A	18A	110A
Repetitive peak reverse voltage	V_{RRM}	V	20	30	40	50	60	80	100
Average rectified output current @60Hz sine wave, resistance load, T_L (FIG1)	I_O	A	1.0						
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, Ta=25℃	I_{FSM}	A	30						
Storage temperature	T_{STG}	℃	-55 ~+150						
Junction temperature	T_J	℃	-55~+125			-55 ~+150			

■Electrical Characteristics(T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SS						
				12AQ	13AQ	14AQ	15AQ	16AQ	18AQ	110AQ
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=1.0A	0.50			0.70		0.85	
Maximum DC reverse current at rated DC blocking voltage per diode@ V_{RM}=V_{RRM}	I_{RRM}	mA	T_a=25℃	0.50					0.10	
			T_a=100℃	10					5.0	

■Thermal Characteristics (T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS						
			12AQ	13AQ	14AQ	15AQ	16AQ	18AQ	110AQ
Thermal resistance	$R_{\theta J-A}$	℃/W	65[1)]						
	$R_{\theta J-L}$		20[1)]						

Note

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

■ Characteristics (Typical)

FIG1：Io-T_L Curve

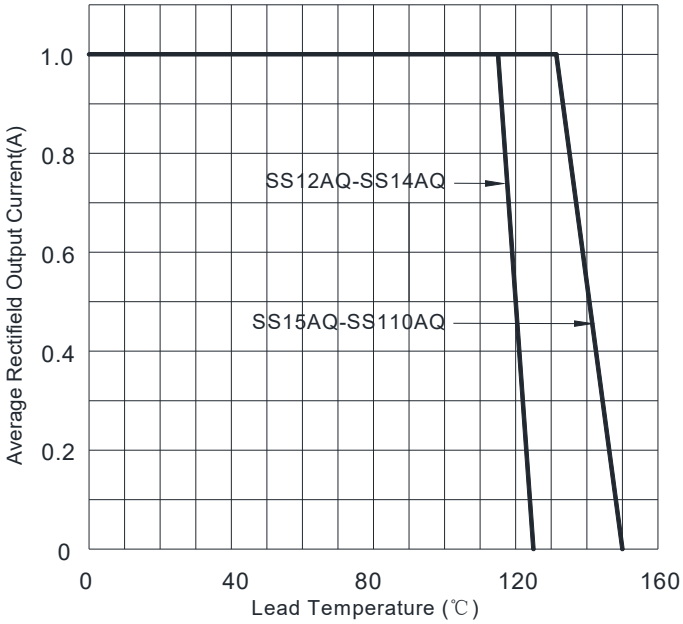


FIG2:Surge Forward Current Capability

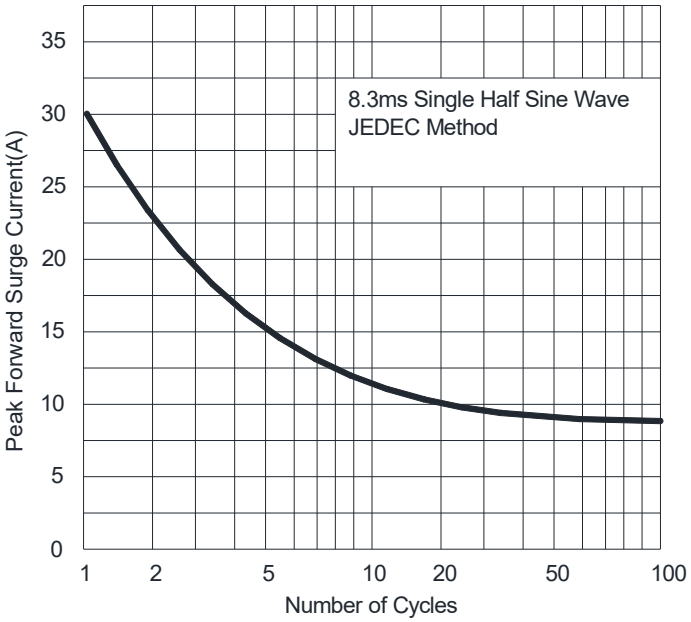


FIG3: Typical Forward Characteristics

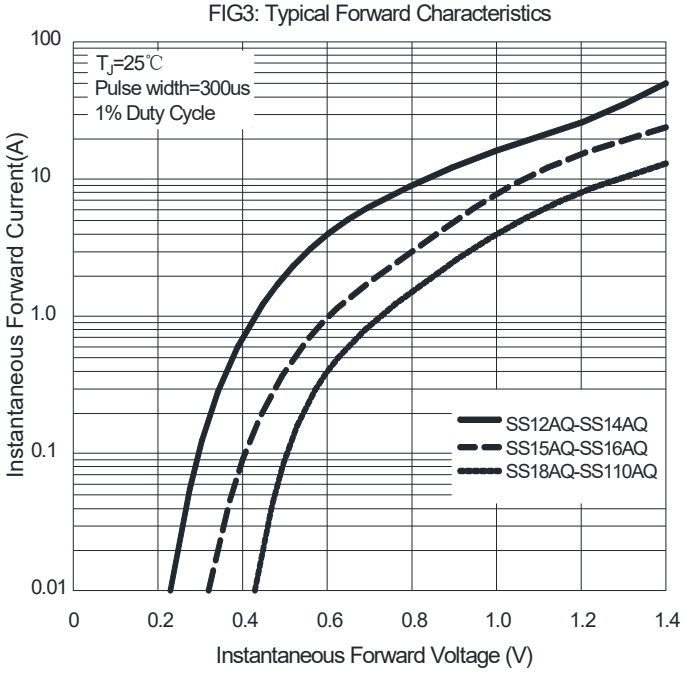
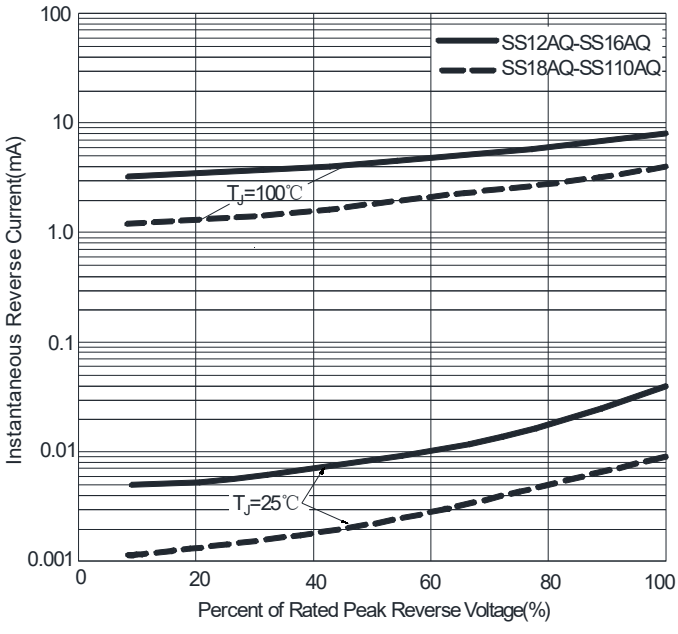


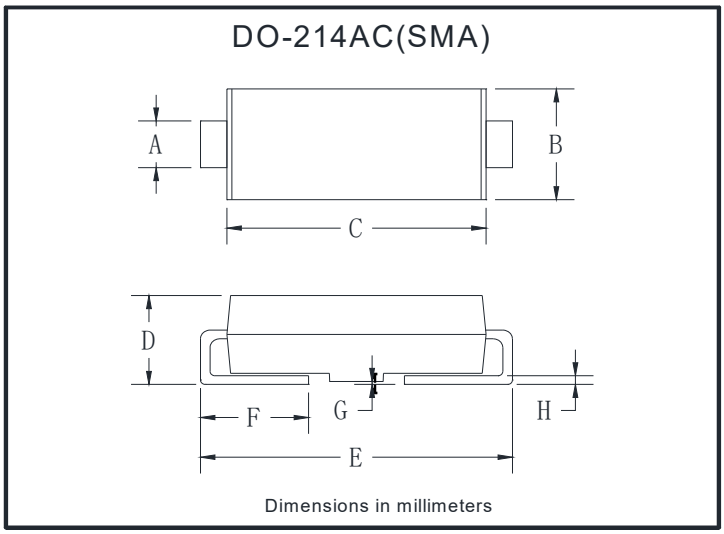
FIG4：Typical Reverse Characteristics



■Ordering Information (Example)

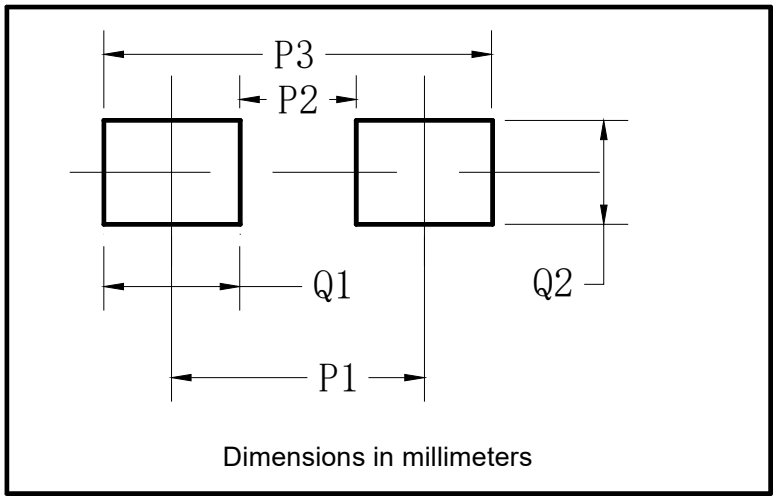
PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SS12AQ-SS110AQ	F2	Approximate 0.067	7500	15000	120000	13” reel

■ Outline Dimensions



DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.25	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.08	0.20
H	0.15	0.31

■Suggested Pad Layout



DO-214AC(SMA)	
Dim	Millimeters
P1	4.00
P2	1.50
P3	6.50
Q1	2.50
Q2	1.70

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