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 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	SS58Q	SS510Q
Device marking code			SS58	SS510
Repetitive peak reverse voltage	V_{RRM}	V	80	100
Maximum RMS voltage	V_{RMS}	V	56	70
Maximum DC blocking voltage	V_{DC}	V	80	100
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	I_{FSM}	A	120	
Voltage rate of change (rated V_R)	dV/dt	V/μs	10000	
Storage temperature	T_{stg}		-55 ~+175	
Junction temperature	T_J		-55 ~+175	

■Electrical Characteristics T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	TEST CONDITIONS		TYP	MAX	UNIT
Instantaneous forward voltage	V_F	I_F=5A	T_J=25	0.77	0.8	V
			T_J=125	0.63	0.75	
Reverse current	I_R	Rated V_R	T_J=25	0.2	10	μA
			T_J=125	-	200	
Typical junction capacitance	C_J	V_R=4V,f=1MHz		150	-	pF

■ 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

Dimensions in millimeters