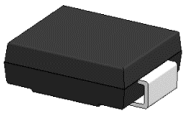
5A,600-1000V High Efficient Rectifier

Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260℃/10 seconds

RoHS
COMPLIANT



SMC (DO-214AB)

Applications

For use of fast switching rectification in lighting, cellular phone, portable device, power supplies and other consumer applications.

Maximum Ratings & Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	HS5J	HS5K	HS5M	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	600	800	1000	V
Maximum RMS voltage	V_{RMS}	420	560	700	V
Maximum DC blocking voltage	V_{DC}	600	800	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	5			A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load per diode	I_{FSM}	150			A
Operating junction temperature range	T_J	-55 to +150			°C
Storage temperature range	T_{STG}	-55 to +150			°C

Thermal-Mechanical Specifications (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	65	°C /W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	10	°C /W
Thermal Resistance, Junction to Lead	$R_{\theta JL}$	15	°C /W

Electrical Specifications(T_A=25℃ unless otherwise noted)						
Parameter	**Symbol**	**Test Conditions**	**HS5J**	**HS5K**	**HS5M**	**Unit**
Forward Drop Voltage	V_F	I_F=5A T_A=25℃	1.7			V
		I_F=5A T_A=125℃	1.3			
Reverse leakage current @V_R	I_R	T_J =25℃	5			uA
		T_J =125℃	100			
Typical junction capacitance	C_J	4.0 V 1 MHZ	40			pF
Maximum reverse recovery time	trr	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	75			nS

Note：

1. Mounted on copper pad area of 8.0 x 8.0mm to each terminal.

Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)

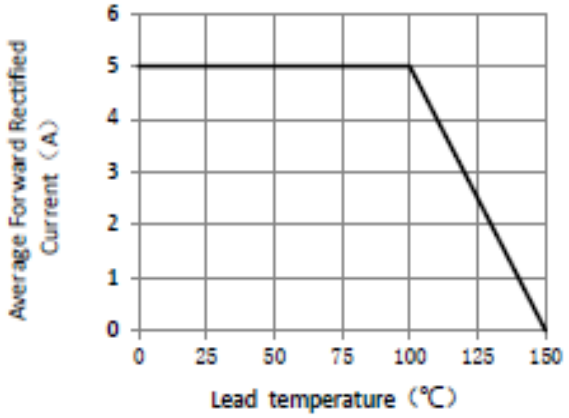


Figure 1.Forward Current Derating Curve

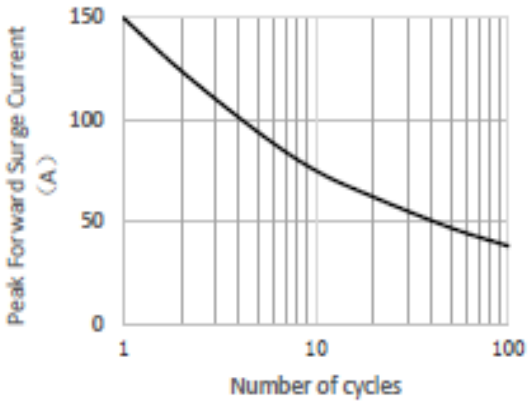


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

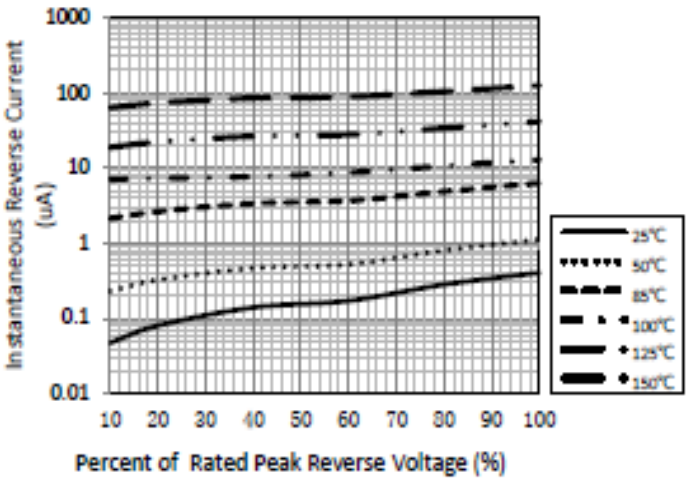


Figure 3. Typical Reverse Characteristics

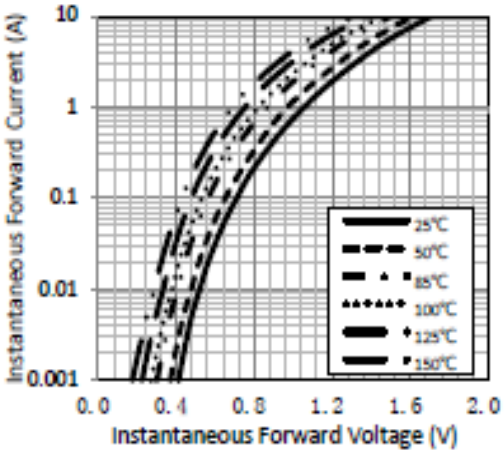


Figure 4. Typical Instantaneous Forward Characteristics

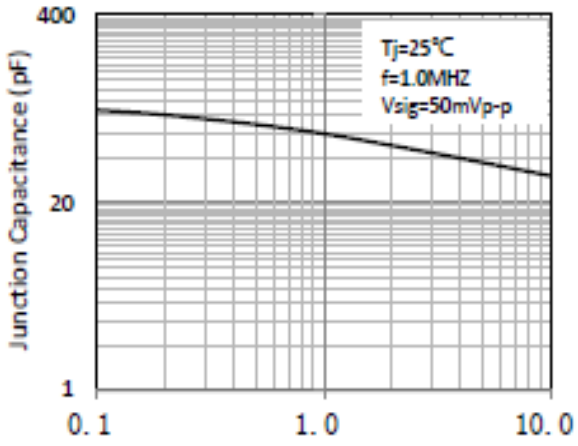
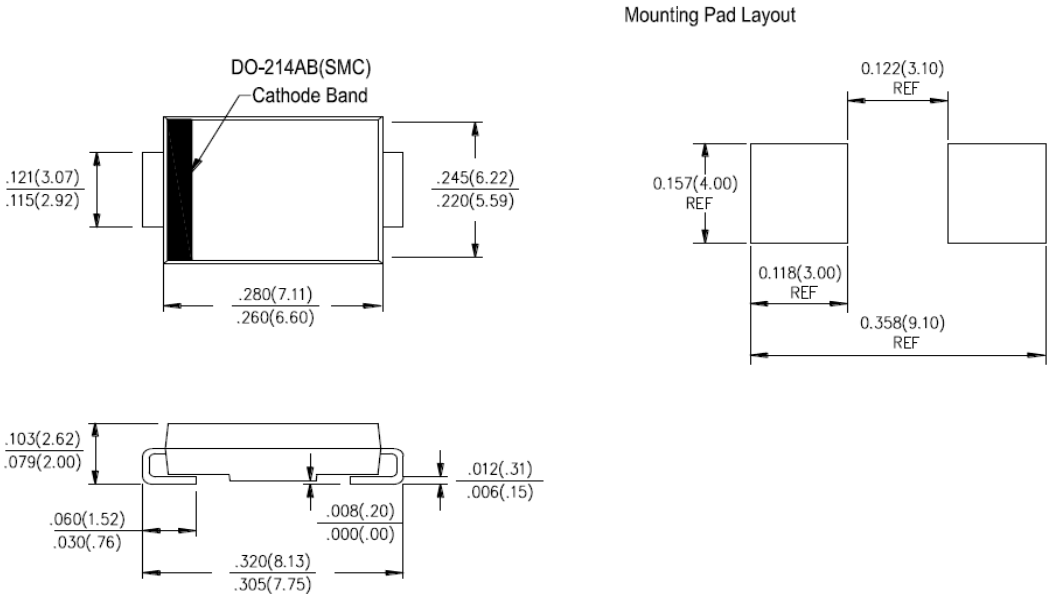


Figure 5. Typical Junction Capacitance

Package Outline Dimensions

in inches (millimeters)

SMC (DO-214AB)



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.20	Modify document format
Rev.C	2023.12.27	Add HS5J and HS5K to product range

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