

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

S5820--S5822

FEATURES

- Metal-Semiconductor junction with guard ring
- Epitaxial construction
- Low forward voltage drop, low switching losses
- High surge capability
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- The plastic material carries U/L recognition 94V-0



MECHANICAL DATA

- Case: SMC molded plastic body
- Terminals: Solder able per MIL-STD-202, method 208
- Polarity: Color band denotes cathode

Maximum Ratings (@T_A = 25°C unless otherwise specified)

Characteristic	Symbol	S5820	S5821	S5822	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	V
Maximum RMS voltage	V _{RWS}	14	21	28	V
Maximum DC blocking voltage	V _{DC}	20	30	40	V
Maximum average forward rectified current at T _L =90°C	I _{F(AV)}	3.0			A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125°C	I _{FSM}	80.0			A

Thermal Characteristics

Characteristic	Symbol	S5820	S5821	S5822	UNITS
Typical junction capacitance (Note2)	C _J	250			p F
Typical thermal resistance (Note3)	R _{θJA}	20			°C/W
Operating temperature range	T _J	- 55 ---- + 125			°C
Storage temperature range	T _{STG}	- 55 ---- +150			°C

Electrical Characteristics (@T_A = 25°C unless otherwise specified)

Characteristic	Symbol	S5820	S5821	S5822	UNITS
Maximum instantaneous forward voltage @ 3.0A (Note1)	V _F	0.475	0.50	0.525	V
Maximum DC reverse current @T _A =25°C at rated DC blocking voltage @T _A =100°C	I _R	2.0 20			m A

NOTE: 1. Pulse test : 300 s pulse width, 1% duty cycle.

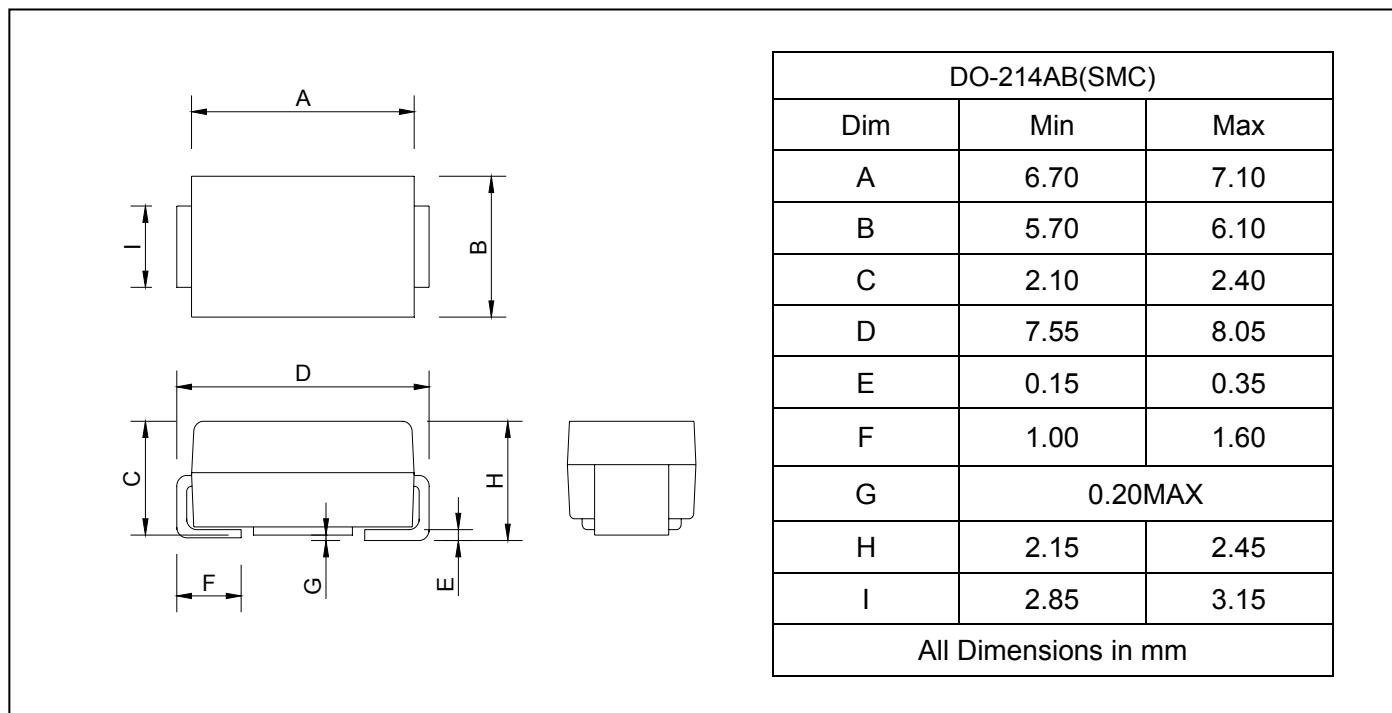
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient

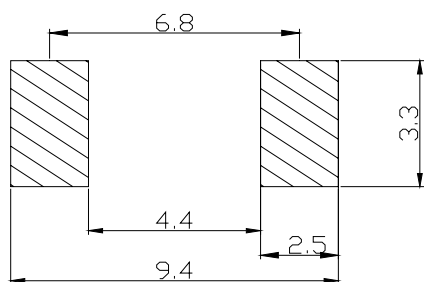
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BARRIER RECTIFIERS**

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PACKAGE OUTLINE DIMENSIONS



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
S5820--S5822	DO-214AB(SMC)	3000/Tape&Reel



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FIG.1 – FORWARD DERATING CURVE

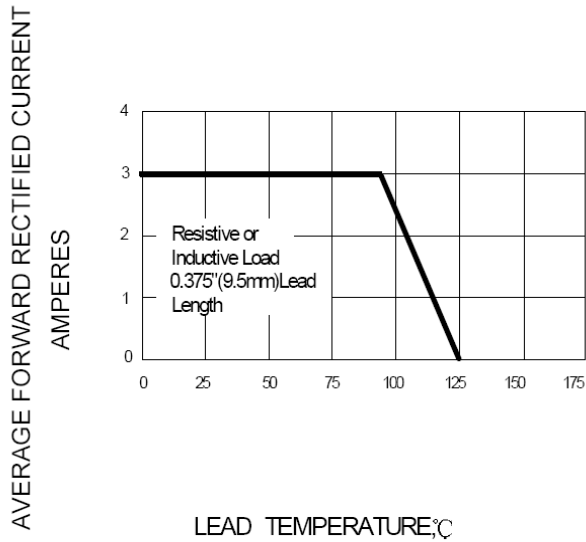


FIG.2 – PEAK FORWARD SURGE CURRENT

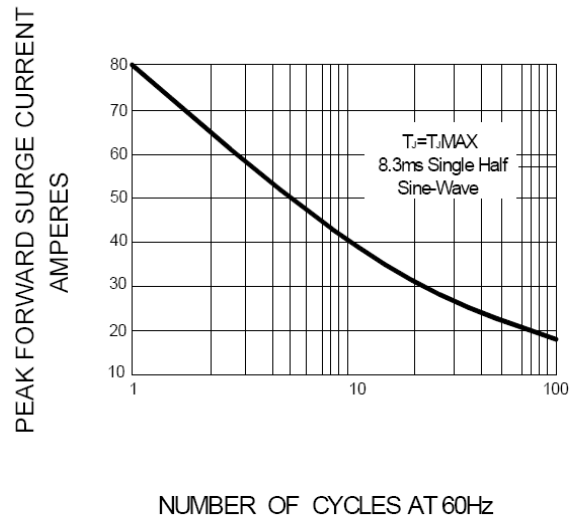


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

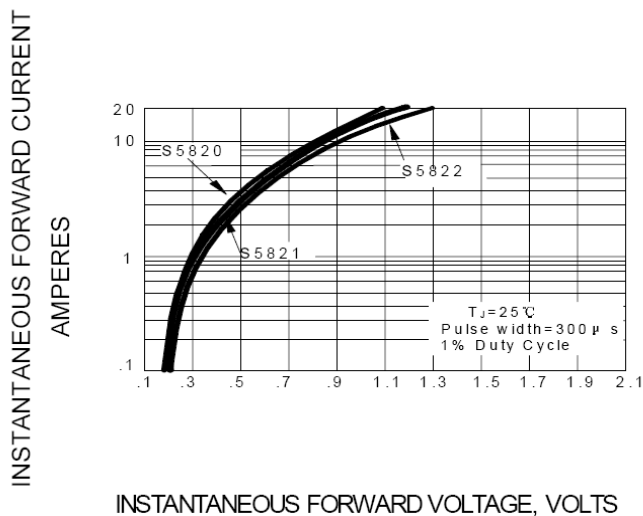


FIG.4 – TYPICAL JUNCTION CAPACITANCE

