

SURFACE MOUNT RECTIFIERS

US5AC--US5MC

FEATURES

- Low cost
- Low leakage
- Low forward voltage drop
- High current capability
- Easily cleaned with Alcohol, Isopropanol and similar solvents
- The plastic material carries U/L recognition 94V-0



MECHANICAL DATA

- Case: JEDEC DO-214AB, molded plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode
- Weight: 0.007 ounces, 0.21 gram
- Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive, load, derate current by 20%.

		US5AC	US5BC	US5DC	US5GC	US5JC	US5KC	US5MC	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current @T _L =90℃	I _(AV)	5.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125℃	I _{FSM}	100							A
Maximum instantaneous forward voltage at5.0 A	V _F	1.0			1.4	1.7			V
Maximum DC reverse current @T _A =25℃ at rated DC blocking voltage @T _A =125℃	I _R	10.0 300							μ A
Typical reverse recovery time (Note1)	t _{rr}	50				75			ns
Typical junction capacitance (Note2)	C _J	15				12			p F
Typical thermal resistance (Note3)	R _{θJA}	15							℃/W
Operating temperature range	T _J	- 55 ---- + 150							℃
Storage temperature range	T _{STG}	- 55 ---- + 150							℃

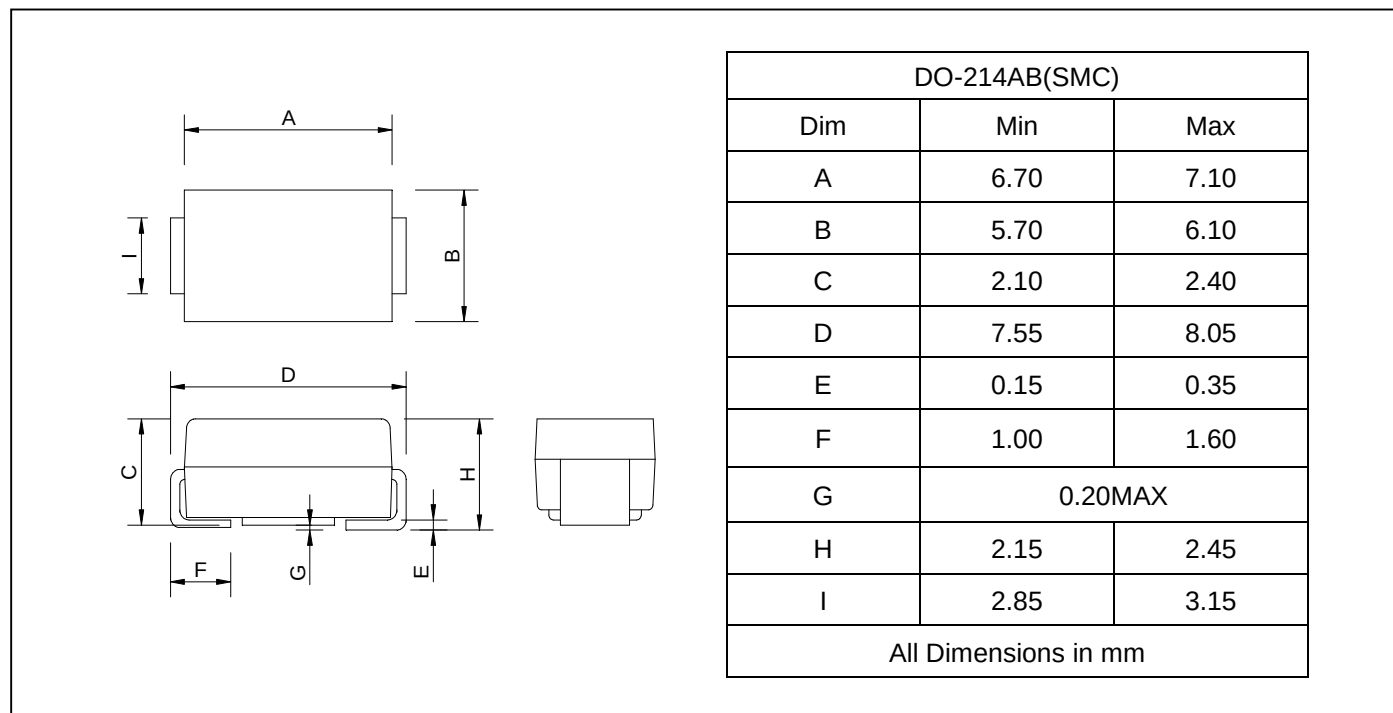
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_{rr}=0.25\text{A}$.

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

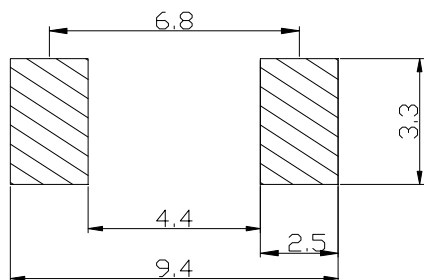
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PACKAGE OUTLINE DIMENSIONS



SOLDERING FOOTPRINT



Unit : mm

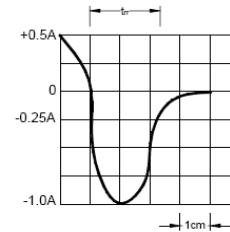
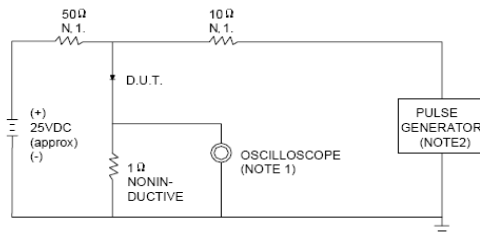
PACKAGE INFORMATION

Device	Package	Shipping
US5AC--US5MC	DO-214AB(SMC)	3000/Tape&Reel

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FIG.1 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ .22pF.
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω .

SET TIME BASE FOR 20/30 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

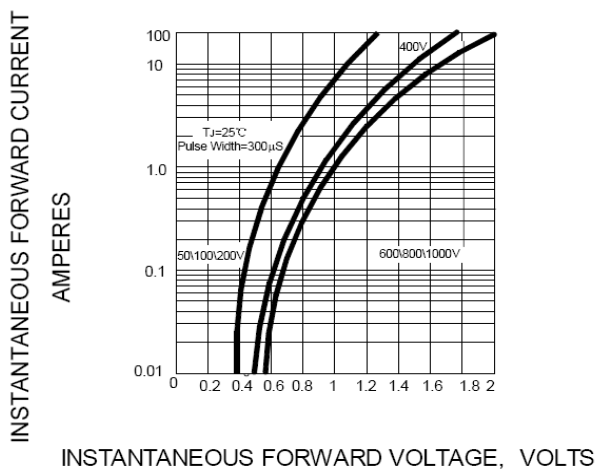


FIG.3 -- FORWARD DERATING CURVE

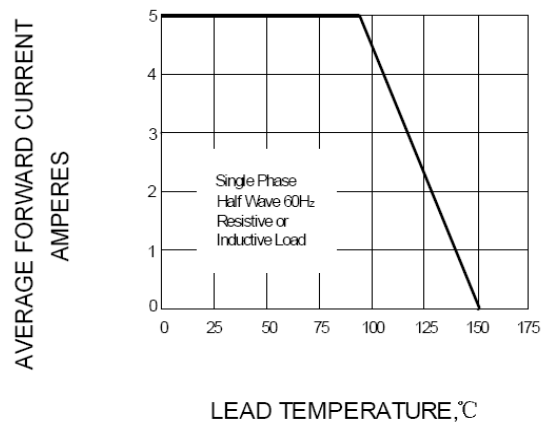


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

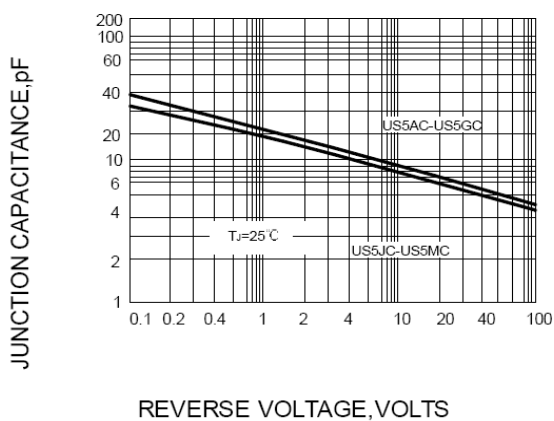


FIG.5 -- PEAK FORWARD SURGE CURRENT

