



US5A-US5M

Surface Mount Rectifiers

VOLTAGE RANGE: 50 --- 1000 V

CURRENT: 5.0 A

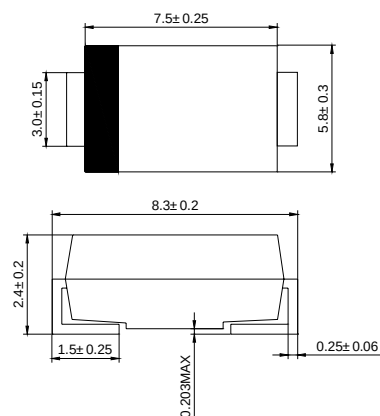
DO-214AB(SMC)

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
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.007 ounces, 0.21 grams
- ◇ Mounting position: Any



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

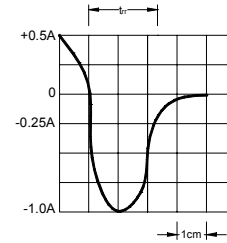
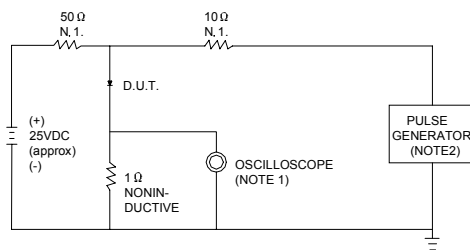
		US5A	US5B	US5D	US5G	US5J	US5K	US5M	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current @T _L =90°C	I _{F(AV)}	5.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125°C	I _{FSM}	100							A
Maximum instantaneous forward voltage at 5.0 A	V _F	1.0			1.4	1.7			V
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =125°C	I _R	10 300							μ A
Typical reverse recovery time (Note1)	t _{rr}	50				75			ns
Typical junction capacitance (Note2)	C _J	15				12			pF
Typical thermal resistance (Note3)	R _{θJA}	15							°C/W
Operating junction temperature range	T _J	- 55 ---- + 150							°C
Storage temperature range	T _{STG}	- 55 ---- + 150							°C

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.

Ratings AND Characteristic Curves

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

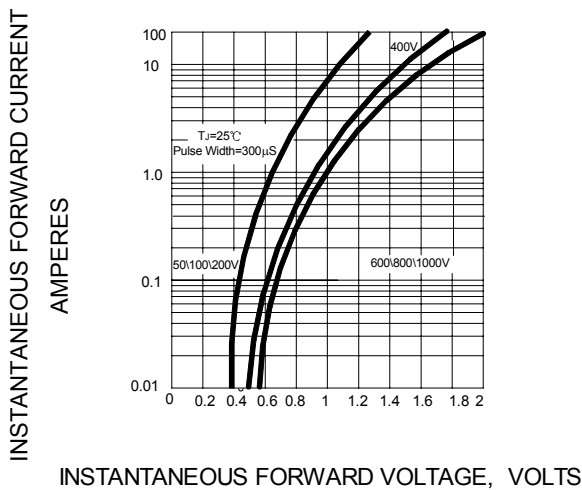


FIG.3 -- FORWARD DERATING CURVE

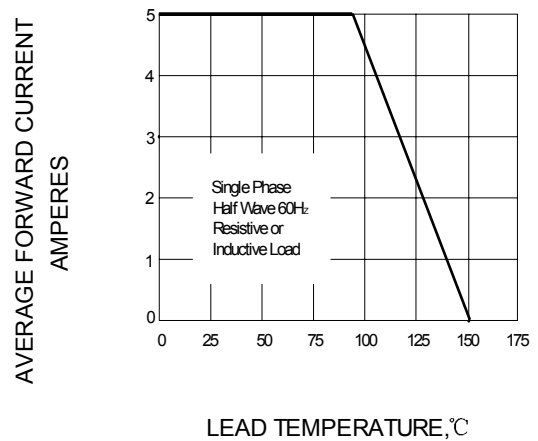


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

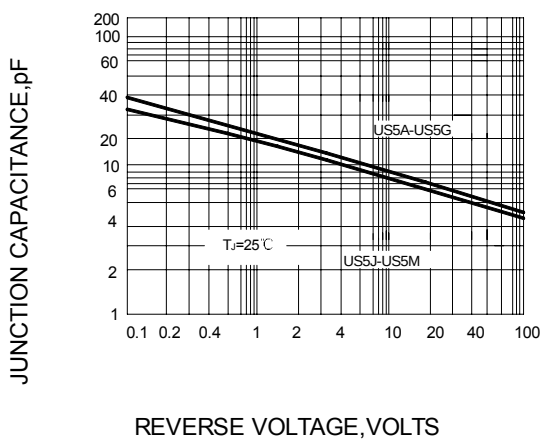


FIG.5 -- PEAK FORWARD SURGE CURRENT

