

US5A-US5M

Surface Mount Rectifiers

VOLTAGE RANGE: 50 --- 1000 V

CURRENT: 5.0 A



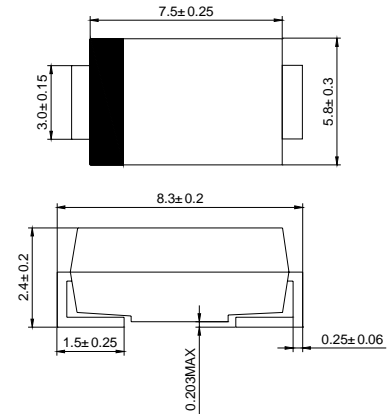
DO-214AB(SMC)

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%.

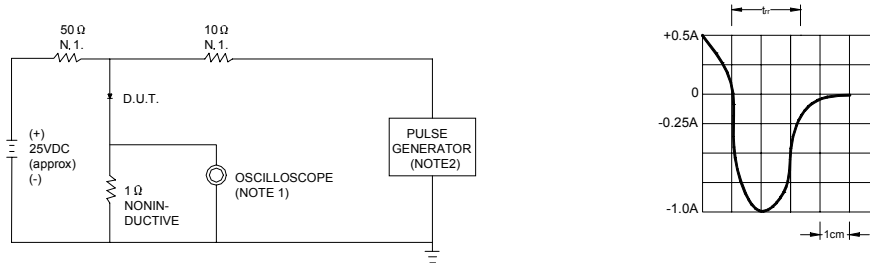
		US5A	US5B	US5D	US5G	US5J	US5K	US5M	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current @ $T_L=90^\circ C$	$I_{F(AV)}$	5.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	I_{FSM}	100							A
Maximum instantaneous forward voltage at 5.0 A	V_F	1.0		1.4		1.7		V	
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=125^\circ C$	I_R	10 300							μA
Typical reverse recovery time (Note1)	t_{rr}	50				75		ns	
Typical junction capacitance (Note2)	C_J	15				12		pF	
Typical thermal resistance (Note3)	$R_{\theta JA}$	15							$^\circ C/W$
Operating junction temperature range	T_J	- 55 ---- + 150							$^\circ C$
Storage temperature range	T_{STG}	- 55 ---- + 150							$^\circ C$

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

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

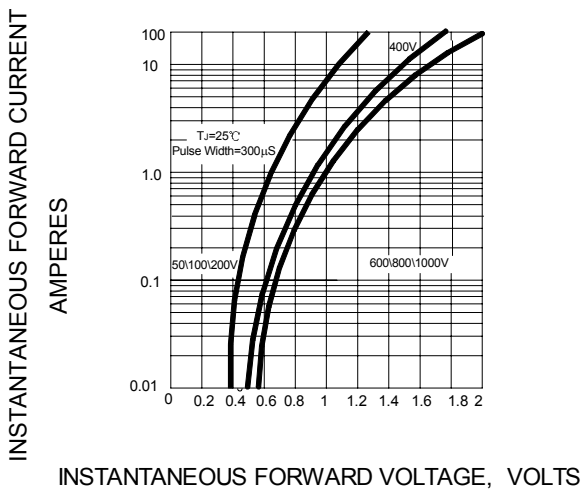


FIG.3 -- FORWARD DERATING CURVE

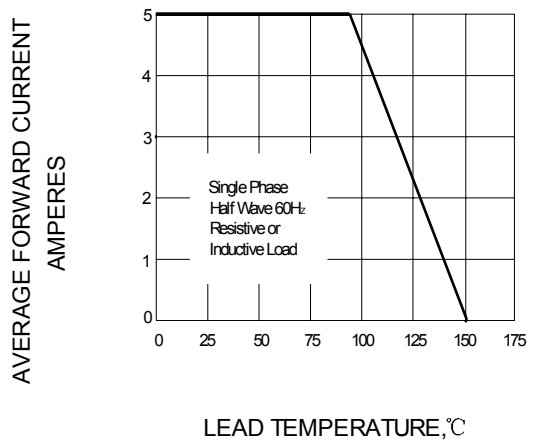


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

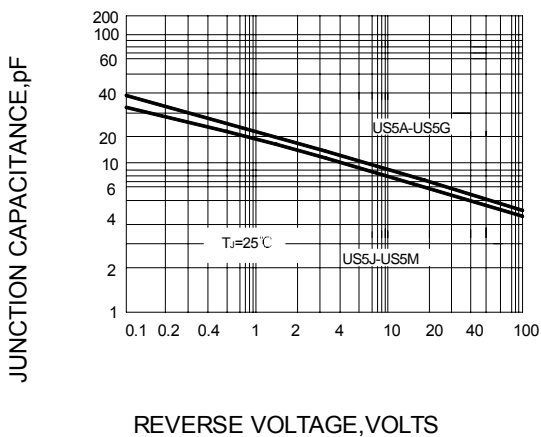


FIG.5 -- PEAK FORWARD SURGE CURRENT

