

SURFACE MOUNT RECTIFIER

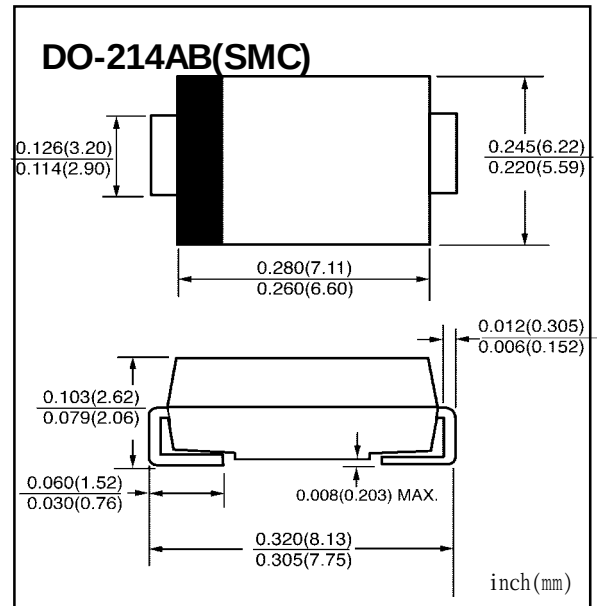
VOLTAGE RANGE: 50 --- 400 V
CURRENT: 3.0 A

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 grams
- ◇ Mounting position: Any



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%.

		ES3A	ES3B	ES3C	ES3D	ES3G	UNITS
Device marking code		EA	EB	EC	ED	EG	
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	150	200	400	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	400	V
Maximum average forward rectified current @T _A =100 °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}	100					A
Maximum instantaneous forward voltage at3.0 A	V _F	0.90				1.25	V
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =100°C	I _R	10 500					μ A
Typical reverse recovery time (Note1)	t _{rr}	25				35	ns
Typical junction capacitance (Note2)	C _J	45					pF
Typical thermal resistance (Note3)	R _{θJA}	25					°C/W
Operating junction temperature range	T _J	- 55 ---- + 150					°C
Storage temperature range	T _{STG}	- 55 ---- + 150					°C

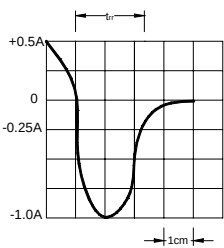
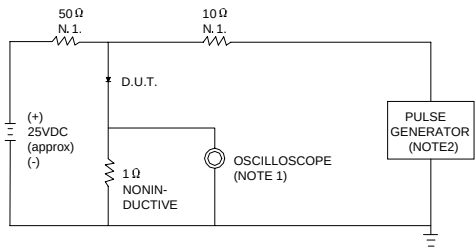
NOTE: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $t_{rr} = 0.25\text{A}$.

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

3. Thermal resistance from junction to ambient and junction to lead P.C.B. mounted on 0.27"X0.27"(7.0X7.0mm²) copper pad areas

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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 10/15 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

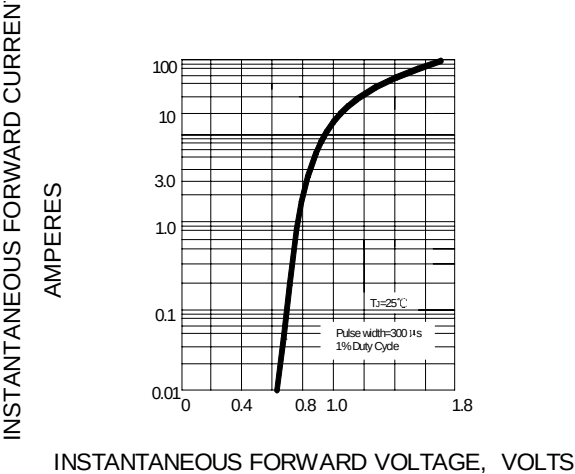


FIG.3 -- FORWARD DERATING CURVE

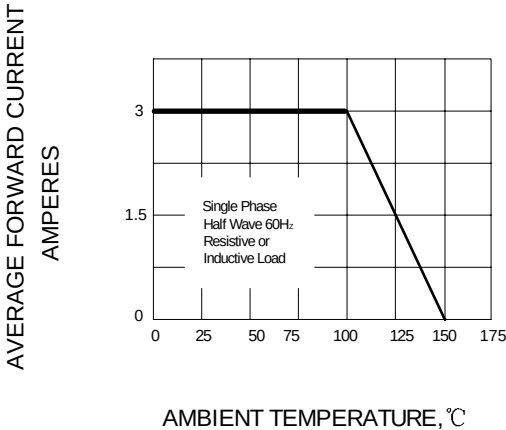


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

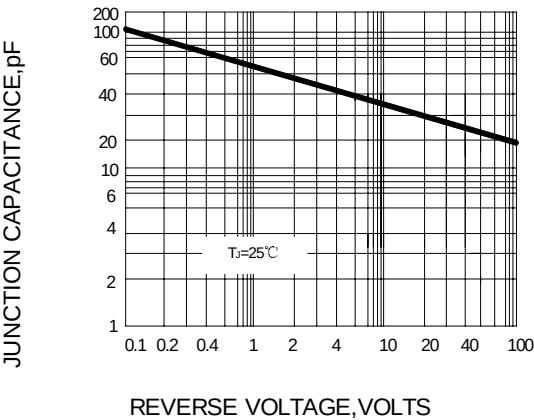


FIG.5 -- PEAK FORWARD SURGE CURRENT

