



SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

SM5817 THRU SM5819

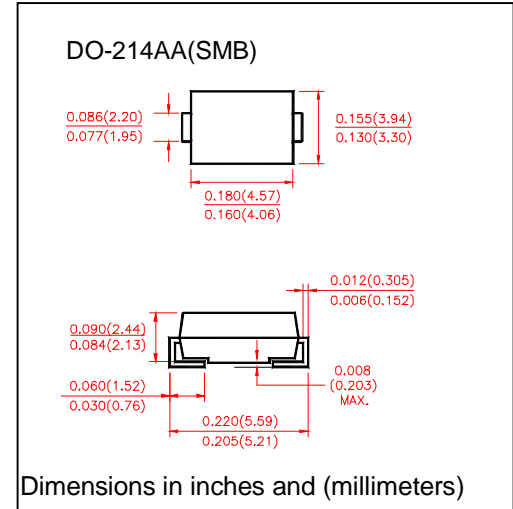
VOLTAGE RANGE **20 to 40Volts**
CURRENT **2.0 Ampere**

FEATURES

- Low profile surface mount package
- Built-in strain relief
- High switching speed, low V_F
- Low voltage drop, high efficiency
- For use in low voltage high frequency inverters, Free willing, and polarity protection applications
- Guarding for over voltage protection

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy :UL 94V-0 rate flame retardant
- Lead: Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.003 ounce, 0.093 gram



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%.

	SYMBOLS	MIN	NOMINAL	MAX	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	Volts
Maximum RMS Voltage	V_{RMS}	20	30	40	Volts
Maximum DC Blocking Voltage	V_{DC}	20	30	40	Volts
Maximum Average Forward Rectified Current at T_L See figur.1 $T_L=105^\circ\text{C}$	$I_{(AV)}$	2.0			Amps
Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	50			Amps
Maximum Instantaneous Forward Voltage @ 2.0A(Note 1)	V_F	0.44			Volts
Maximum DC Reverse Current at rated DC Blocking voltage per element	I_R	$T_A=25^\circ\text{C}$	0.5		mA
		$T_A=100^\circ\text{C}$	10.0		
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	75			°C/W
	$R_{\theta JL}$	17			
Operating Junction Temperature	T_J	(-55 to+150)			°C
Storage Temperature Rang	T_{STG}	(-55 to +150)			°C

Notes:

1. Pulse test:300 μ s pulse width,1% duty cycle
2. PCB mounted with 0.2"×0.2"(5.0cm×5.0cm)copper pads



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FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

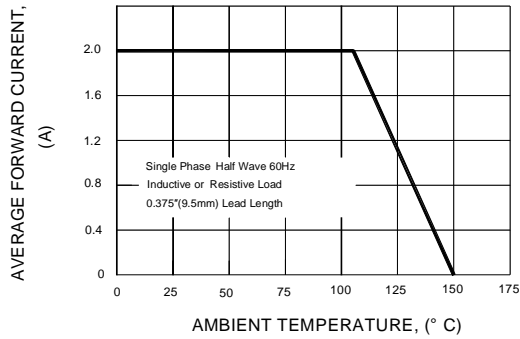


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

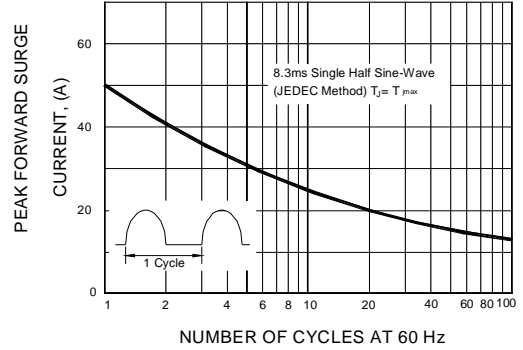


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

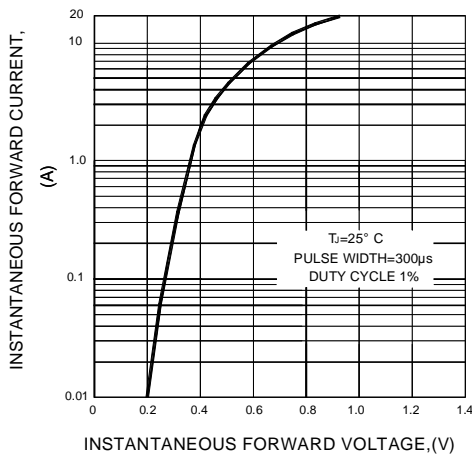


FIG.4-TYPICAL REVERSE CHARACTERISTICS

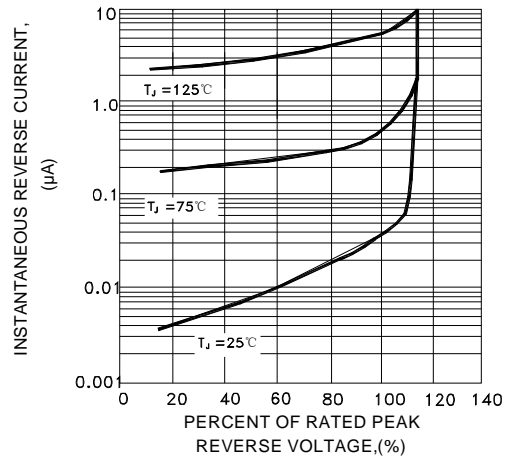


FIG.5-TYPICAL JUNCTION CAPACITANCE

