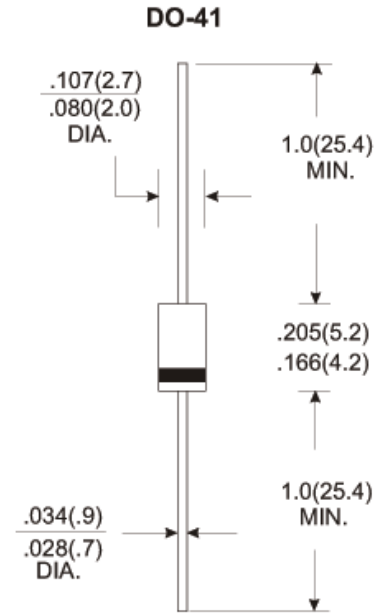
SCHOTTKY BARRIER RECTIFIER

1N5817 THRU 1N5819 20 to 40 V 1.0 A

Central Plate Electronics Co.,Ltd.

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for over voltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
- For use in low voltage ,high frequency inverters, Free wheeling, and polarity protection applications
- High temperature soldering guaranteed:250℃/10 seconds At terminals,0.375"(9.5mm) lead length, 5lbs. (2.3kg) tension



Dimensions in inches and (millimeters)

Mechanical Data

- Case: JEDEC DO-41 molded plastic body
- Terminals: Plated axial leads, Solder able per MIL-STD-750, method 2026
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 0.012ounce, 0.33 gram

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified. Single phase, half wave, 60HZ, resistive or inductive load. For capacitive load, derate current by 20%.

	Symbols	1N5817	1N5818	1N5819	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	Volts
Maximum RMS Voltage	V_{RMS}	14	21	28	Volts
Maximum DC Blocking Voltage	V_{DC}	20	30	40	Volts
Maximum non-repetitive peak reverse voltage	V_{RSM}	24	36	48	Volts
Maximum average forward rectified current 0.375"(9.5mm)lead length at T_L=90℃	$I_{(AV)}$	1.0			Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method) T_L=70℃	I_{FSM}	25.0			Amp
Maximum instantaneous forward voltage at 1.0 A(note 1) Maximum instantaneous forward voltage at 3.1 A(note 1)	V_F	0.450 0.750	0.550 0.875	0.600 0.900	Volts
Maximum Reverse Current T_A=25℃ at Rated DC Blocking Voltage T_A=100℃	I_R	0.5 10.0			mAmp
Typical Junction Capacitance (Note 3)	C_J	110.0			pF
Typical Thermal Resistance (Note 2)	R_{θ} JA R_{θ} JL	50 15.0			℃/W
Operating and Storage Temperature Range	T_J T_{STG}	-65 to +125			℃

NOTES:

1 .Pulse test: 300 μs pulse width,1% duty cycle

2. Thermal resistance (from junction to ambient) Vertical P.C.B. mounted, with 1.5X1.5"(38X38mm) copper pads

3. Measured at 1.0MHz and reverse voltage of 4.0 volts

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RATINGS AND CHARACTERISTIC CURVES (1N5817 THRU 1N5819)

FIG.1-FORWARD CURRENT DERATING CURVE

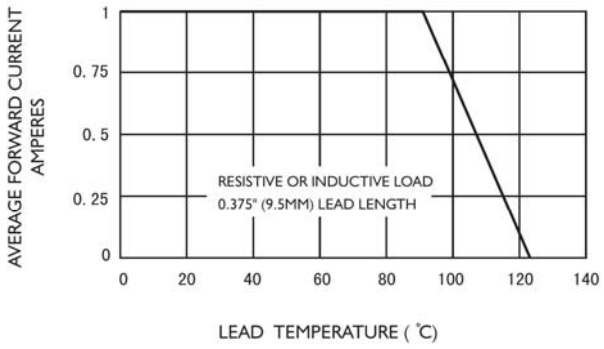

FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

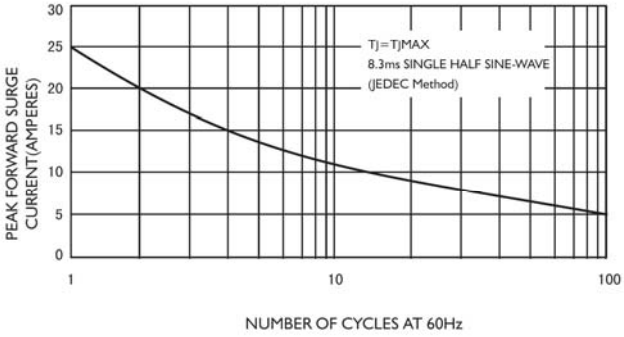

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

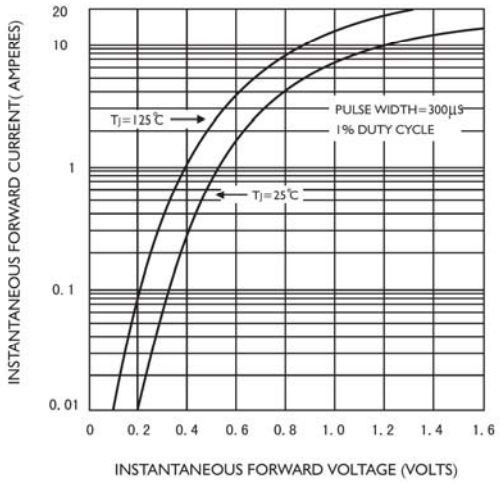

FIG.4-TYPICAL REVERSE CHARACTERISTICS

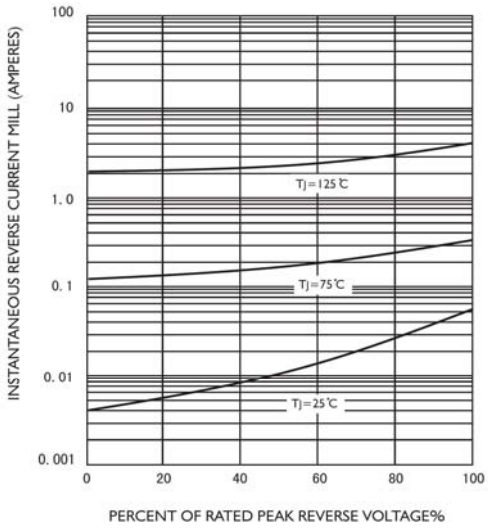

FIG.5-TYPICAL JUNCTION CAPACITANCE

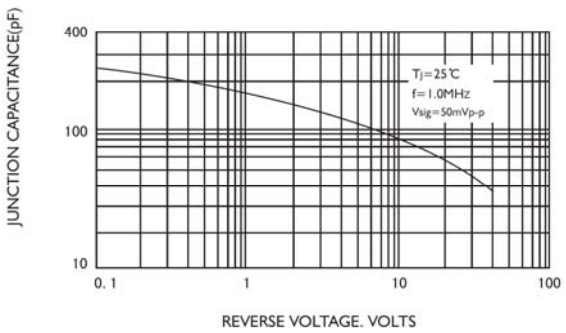

FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE