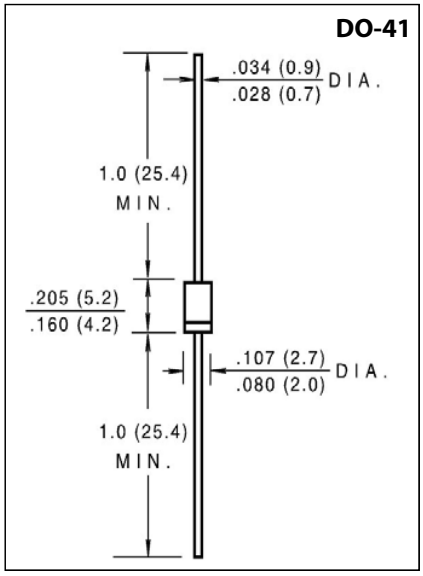
SCHOTTKY BARRIER RECTIFIER

1N5817 - 1N5819

VOLTAGE RANGE - 20 to 40 V
CURRENT - 1 A

FEATURES

- Fast switching.
- Low forward voltage, high current capability.
- Low power loss, high efficiency.
- High current surge capability.
- High temperature soldering guaranteed:
  250/10 seconds, 0.375" (9.5mm) lead length
  at 5 lbs. (2.3kg) tension.



MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V - 0 rate flame retardant.
- Polarity: Color band denoted cathode end.
- Lead: Plastic axial lead, solderable per MIL - STD - 202E method 208C
- Mounting position : Any
- Weight: 0.012 ounce, 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	UNIT
Maximum Repetitive 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 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)		I_{FSM}	25			Amps
Maximum Instantaneous Forward Voltage (Note 1) at	1.0A	V_F	0.450	0.550	0.600	Volts
Maximum DC Reverse Current at rated DC blocking voltage (Note 1)	T_A = 25℃	I_R	0.5			mA
	T_A = 100℃		10			
Typical Junction Capacitance (Note 2)		C_j	110			pF
Typical Thermal Resistance (Note 3)		$R_{\theta JA}$	50			℃/W
Operating and Storage Temperature Range		T_J, T_{STG}	(-55 to +125)			℃

NOTES:

1. Pulse test: 300 s pulse width, 1% duty cycle.
2. Measured at 1MHz and applied reverse voltage of 4.0 volts.
3. Thermal resistance from junction to ambient P.C.B. mounted with 0.375" (9.5mm) lead length with 1.5" x 1.5" (38 X 38mm) copper pads.

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RATING AND CHRACTERISTIC CURVES 1N5817 - 1N5819

FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE

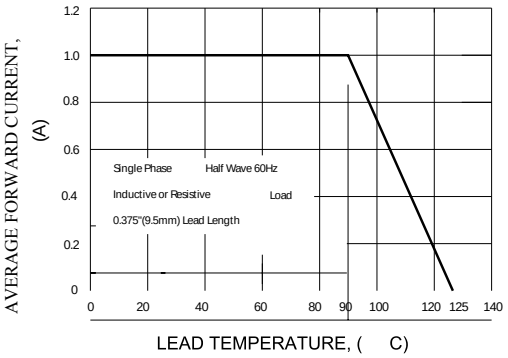

FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

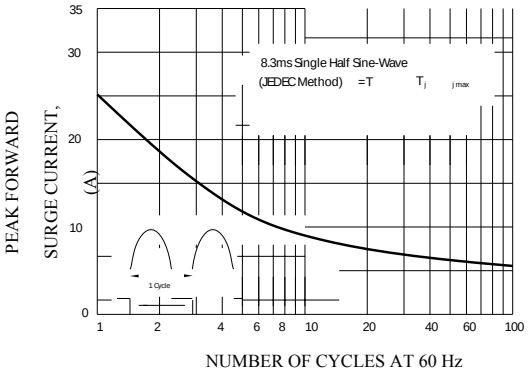

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

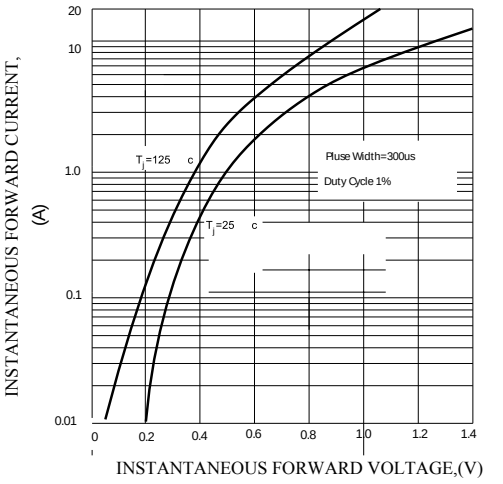

FIG.4-TYPICAL REVERSE CHARACTERISTICS

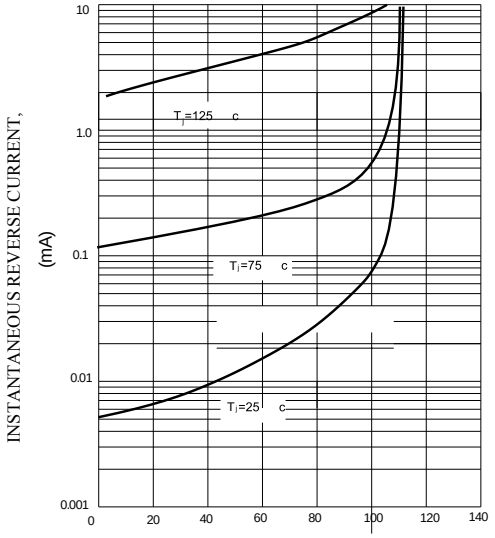

FIG.5-TYPICAL JUNCTION CAPACITANCE