



SCHOTTKY BARRIER RECTIFIER

1N5817 THRU 1N5819

VOLTAGE RANGE
CURRENT

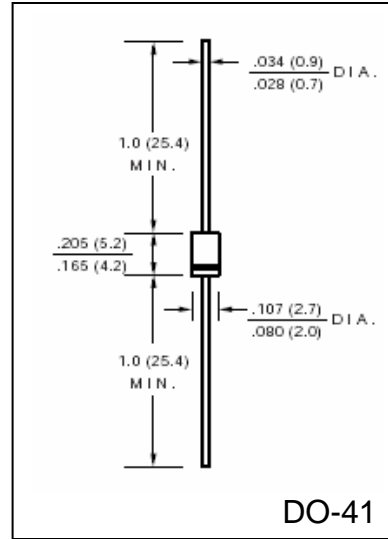
20 to 40 Volts
1.0 Ampere

FEATURES

- Fast switching speed
- Low forward voltage
- Low power loss, high efficiency
- High surge current capacity
- High Temperature soldering guaranteed:
260°C / 10 second, 0.375" (9.5mm) lead length

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V – 0 rate flame retardant
- Polarity: Color Band denotes cathode end
- Lead: Plated 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°C 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 $T_C = 90^\circ\text{C}$ (Note 1)	$I_{(AV)}$	1.0			Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	25			Amps
Maximum Instantaneous Forward Voltage @ 1.0A @ 3.0A	V_F	0.450 0.750	0.550 0.875	0.600 0.900	Volts
Maximum DC Reverse Current at Rated $T_A = 25^\circ\text{C}$ DC Blocking Voltage per element $T_A = 100^\circ\text{C}$	I_R	1.0 10			MA
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	110			pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	50			$^\circ\text{C}/\text{W}$
Operating Junction Temperature	T_J	(-55 to +125)			$^\circ\text{C}$
Storage Temperature Rang	T_{STG}	(-55 to +125)			$^\circ\text{C}$

Notes:

1. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted, with 1.5" x 1.5" (38cm x 38cm) copper pads



RATINGS AND CHARACTERISTIC CURVES 1N5817 THRU 1N5819

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

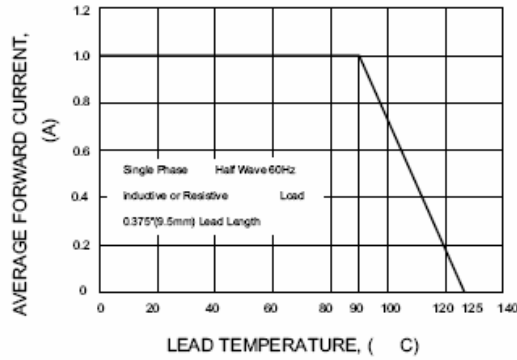


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

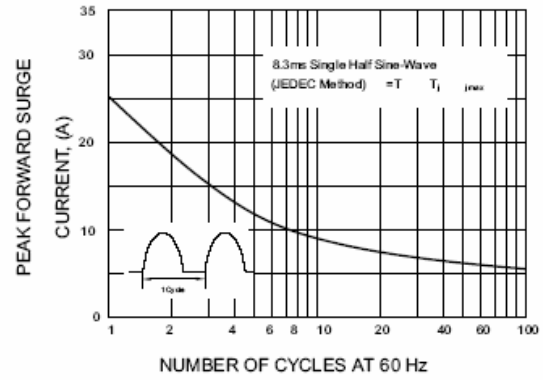


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

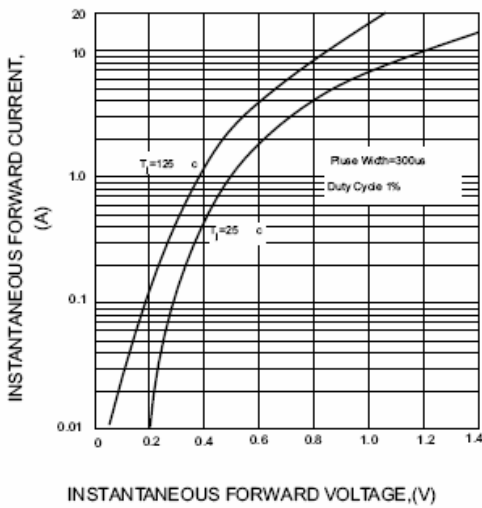


FIG.4-TYPICAL REVERSE CHARACTERISTICS

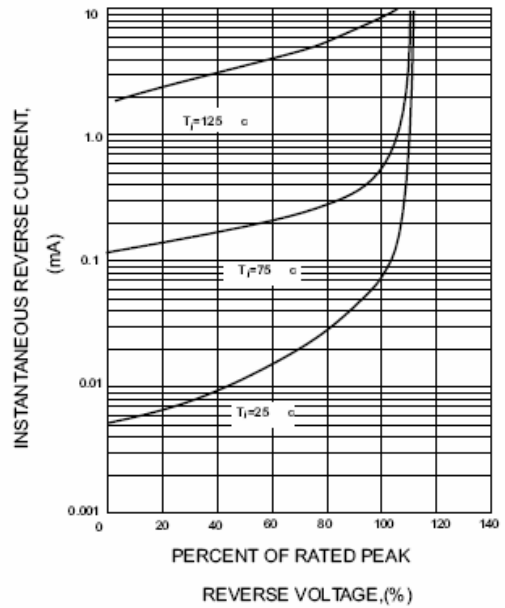


FIG.5-TYPICAL JUNCTION CAPACITANCE

