SEMICONDUCTOR

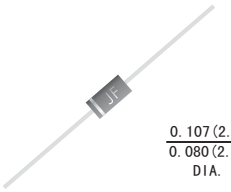
1N5817 THRU 1N5819

SCHOTTKY BARRIER RECTIFIER

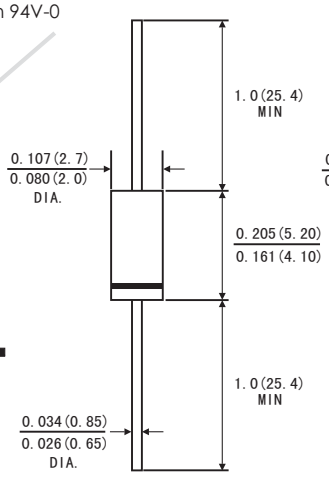
Reverse Voltage 20 to 40 Volts
Forward Current - 1.0Ampere

FEATURES

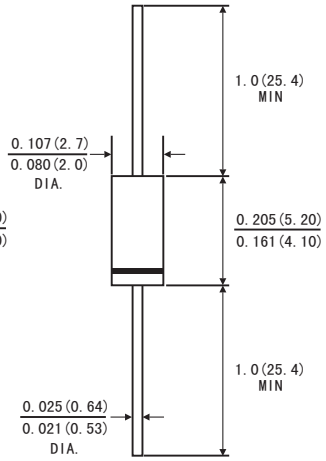
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



DO-41



A-405



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: JEDEC DO-41/A-405 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Mounting Position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

	Symbols	1N5817	1N5818	1N5819	Units
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	$I_{(AV)}$	1.0			Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25.0			Amps
Maximum instantaneous forward voltage at 1.0 A(note 1)	V_F	0.450	0.550	0.600	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) T_A=25°C	I_R	0.1			mA
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) T_A=100°C	I_R	5.0			mA
Typical junction capacitance(Note 3)	C_J	110.0			pF
Typical thermal resistance(Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	50.0 15.0			°C/W
Operating junction and storage temperature range	T_J T_{STG}	-55 to +150			°C

Notes: 1.Pulse test: 300μs 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

RATINGS AND CHARACTERISTIC CURVES 1N5817 THRU 1N5819

FIG.1-FORWARD CURRENT DERATING CURVE

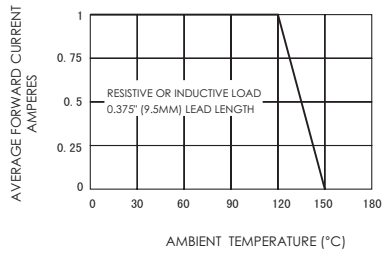


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

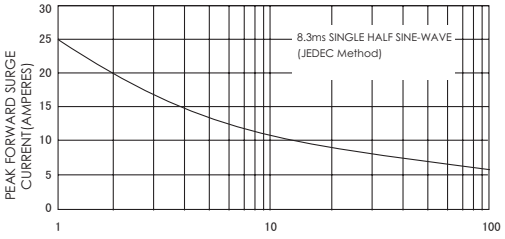


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

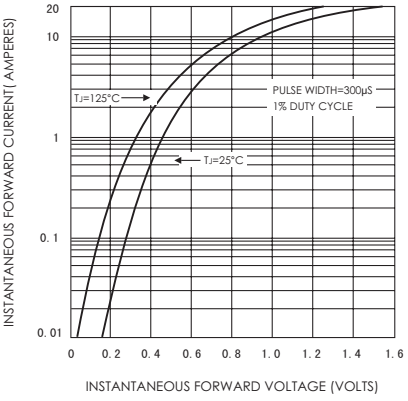


FIG.4-TYPICAL REVERSE CHARACTERISTICS

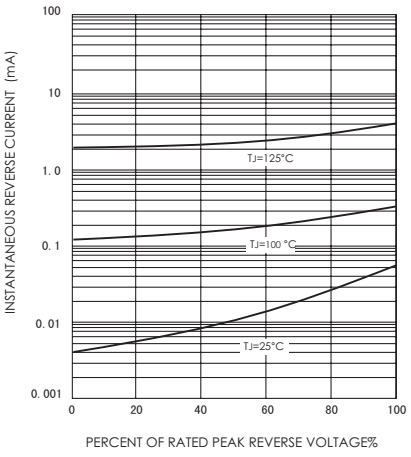


FIG.5-TYPICAL JUNCTION CAPACITANCE