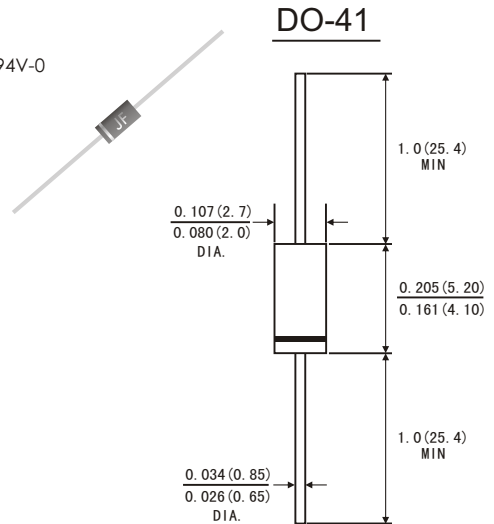


## FEATURES

- 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 2002/95/EC and WEEE 2002/96/EC

## MECHANICAL DATA

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



Dimensions in inches and (millimeters)

## 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 <sub>RRM</sub>	20	30	40	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	Volts
Maximum average forward rectified current 0.375"(9.5mm)lead length at $\bar{T}_L=90^\circ\text{C}$	I(AV)	1.0			Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) at $\bar{T}_L=70^\circ\text{C}$	I <sub>FSM</sub>	25.0			Amps
Maximum instantaneous forward voltage at 1.0 A(note 1 )	V <sub>F</sub>	0.450	0.550	0.600	Volts
Maximum instantaneous forward voltage at 3.0 A(note 1 )	V <sub>F</sub>	0.750	0.875	0.900	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	T <sub>A</sub> =25°C	0.2			mA
	T <sub>A</sub> =100°C	10.0			
Typical junction capacitance(Note 3)	C <sub>J</sub>	110.0			pF
Typical thermal resistance(Note 2)	R <sub>θ JA</sub>	50.0			°C/W
	R <sub>θ JL</sub>	15.0			
Operating junction and storage temperature range	T <sub>J</sub> 、T <sub>STG</sub>	-65 to +150			°C

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

# RATINGS AND CHARACTERISTIC CURVES 1N5817 THRU 1N5819

FIG.1-FORWARD CURRENT DERATING CURVE

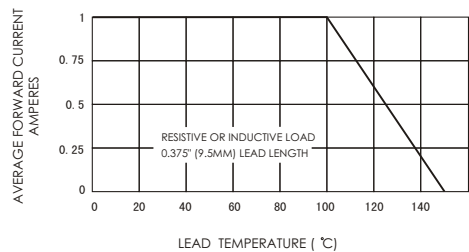


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

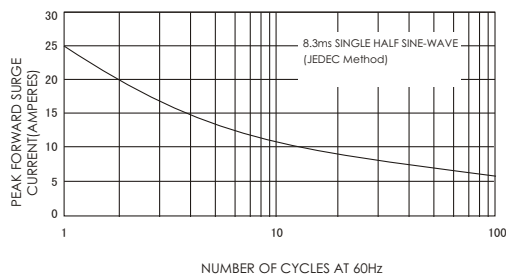


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

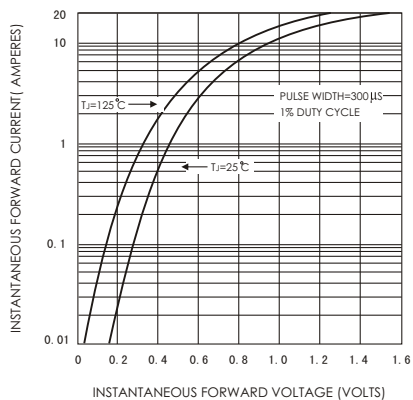


FIG.4-TYPICAL REVERSE CHARACTERISTICS

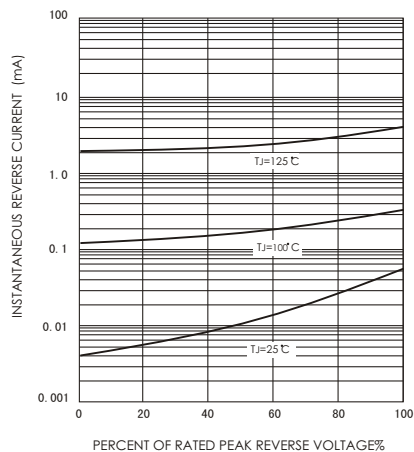


FIG.5-TYPICAL JUNCTION CAPACITANCE

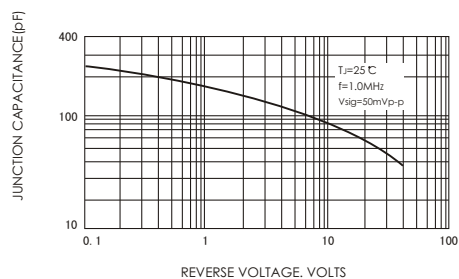


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

