# 1N17 THRU 1N19

## SCHOTTKY BARRIER RECTIFIER

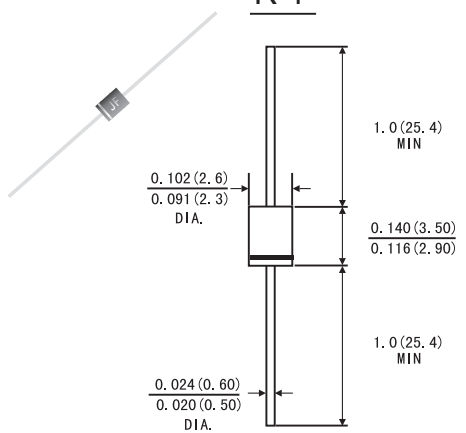
Reverse Voltage - 20 to 40 Volts
Forward Current - 1.0Ampere

SEMICONDUCTOR

## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- 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

## R-1




Dimensions in inches and (millimeters)

## MECHANICAL DATA

- *Case*: R-1 molded plastic body
- *Terminals*: Plated axial leads, solderable per MIL-STD-750,method 2026
- *Polarity*: color band denotes cathode end
- *Mounting Position*: Any
- *Weight*: 0.007ounce,0.20 gram

## 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 | 1N17 | 1N18 | 1N19 | 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 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 C ° | $I_{(AV)}$ | 1.0 | | | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) at $T_L$=70 C° | $I_{FSM}$ | 25.0 | | | Amps |
| Maximum instantaneous forward voltage at 1.0 A(note 1 ) | $V_F$ | 0.450 | 0.550 | 0.600 | Volts |
| Maximum instantaneous forward voltage at 3.1 A(note 1 ) | $V_F$ | 0.750 | 0.875 | 0.900 | |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) $T_A$=25℃ | $I_R$ | 0.5 | | | mA |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) $T_A$=100℃ | $I_R$ | 10.0 | | | mA |
| Typical junction capacitance(Note 3) | $C_J$ | 110.0 | | | pF |
| Typical thermal resistance(Note 2) | $R_{\theta JA}$<br>$R_{\theta JL}$ | 50.0<br>15.0 | | | ℃/W |
| Operating junction 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 , 0.5"(12.7mm)lead length

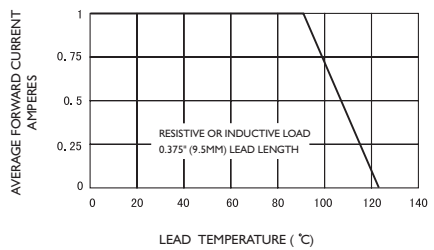
3.Measured at 1.0MHz and reverse voltage of 4.0 volts



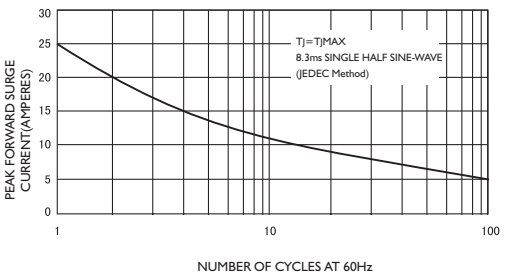
JINAN JINGHENG CO., LTD. NO.51 HEPING ROAD PR CHINA TEL:86-531-6943657 FAX:86-531-6947096 WWW.JIFUSEMICON.COM

# RATINGS AND CHARACTERISTIC CURVES 1N17 THRU 1N19

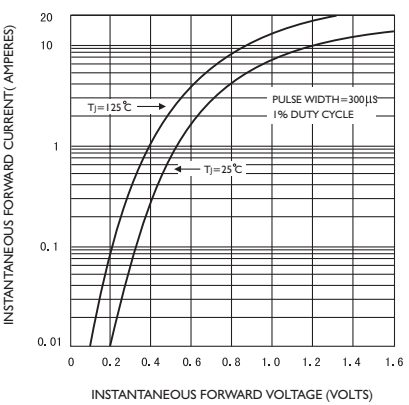
## FIG.1-FORWARD CURRENT DERATING CURVE



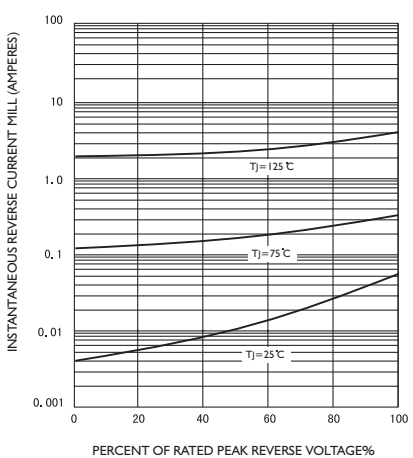

## FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



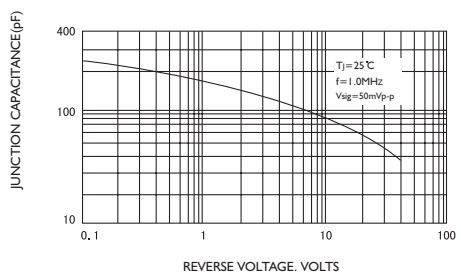

## FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



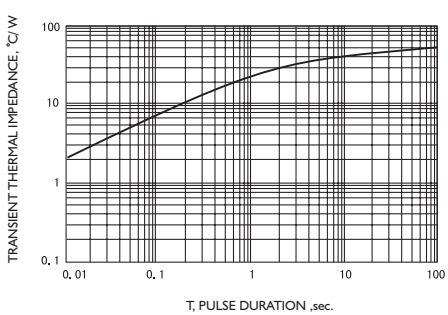

## FIG.4-TYPICAL REVERSE CHARACTERISTICS




## FIG.5-TYPICAL JUNCTION CAPACITANCE




## FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE






JINAN JINGHENG CO., LTD. NO.51 HEPING ROAD PR CHINA TEL:86-531-6943657 FAX:86-531-6947096 WWW.JIFUSEMICON.COM