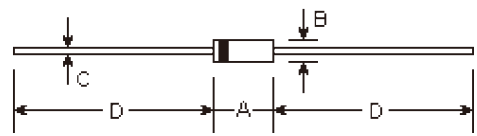
Schottky Barrier Rectifier Reverse Voltage 20V~40V, Forward Current 1.0 Ampere

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guardring 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: 250℃/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3Kg) tension

DO-41



DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.165	0.205	4.2	5.2	
B	0.079	0.106	2.0	2.7	ϕ
C	0.028	0.034	0.71	0.86	ϕ
D	1.000	-	25.40	-	

Mechanical Data

- **Case:** 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:** 0.012 ounce, 0.33 gram

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

	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 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℃	$I_{(AV)}$	1.0			Amp
Peak forward surge current, 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method) at T_L=70℃	I_{FSM}	25.0			Amps
Maximum instantaneous forward voltage at 1.0A (Note 1) Maximum instantaneous forward voltage at 3.1A (Note 1)	V_F V_F	0.450 0.750	0.550 0.875	0.600 0.900	Volts Volts
Maximum instantaneous reverse current T_A=25℃(Note1) at rated DC blocking voltage T_A=100℃	I_R	1.0 10.0			mA
Typical junction capacitance (Note 3)	C_J	110.0			ρ F
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	50.0 15.0			℃/W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +125			℃

Notes:

(1) Pulse test: 300uS pulse width, 1% duty cycle

(2) Thermal resistance from junction to lead, and/or to ambient P.C.B. mounted with 0.375" (9.5mm) lead length with 1.5X1.5" (38X38mm) copper pads

(3) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT DERATING CURVE

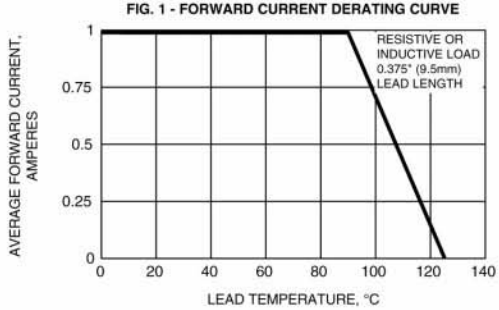


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

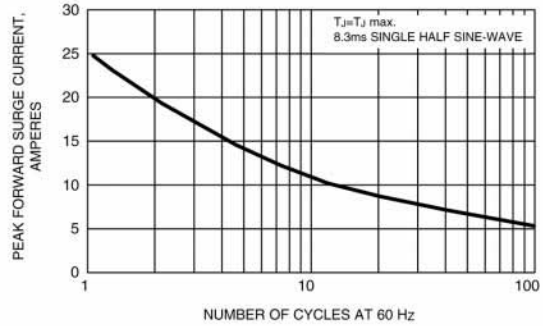


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

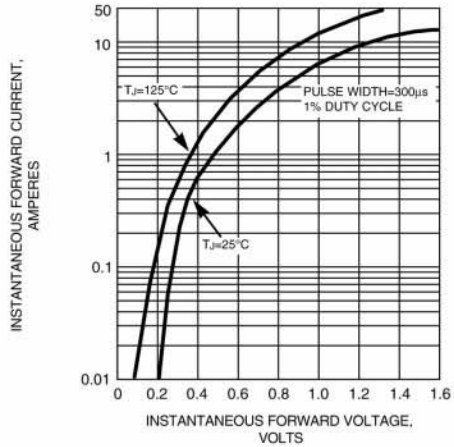


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

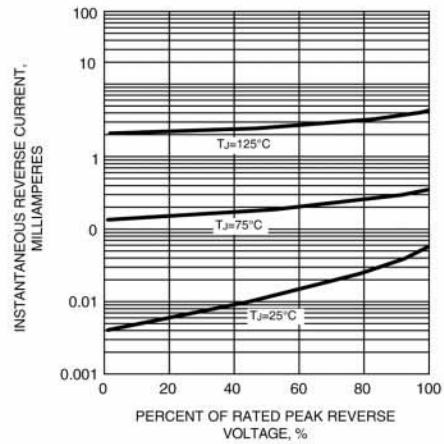


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

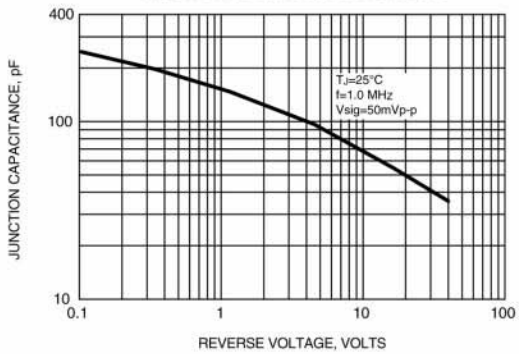


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE