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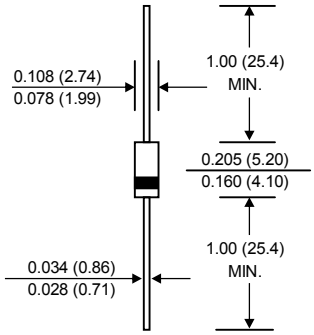
1N5817 - 1N5819

SCHOTTKY BARRIER RECTIFIER DIODES

PRV : 20 - 40 Volts
I_O : 1.0 Ampere

DO - 41



Dimensions in inches and (millimeters)

FEATURES :

* High current capability
* High surge current capability
* High reliability
* High efficiency
* Low power loss
* Low cost
* Low forward voltage drop
* Pb / RoHS Free

MECHANICAL DATA :

* Case : DO-41 Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.312 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

RATING	SYMBOL	1N5817	1N5818	1N5819	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	V
Maximum RMS Voltage	V_{RMS}	14	21	28	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	V
Maximum Average Forward Current 0.375", 9.5mm Lead Length at T_L = 90 °C	$I_{F(AV)}$	1.0			A
Maximum Peak Forward Surge Current, 8.3ms single half sine wave Superimposed on rated load (JEDEC Method) T_L = 70 °C	I_{FSM}	25			A
Maximum Forward Voltage at I_F = 1.0 A	V_F	0.45	0.55	0.60	V
Maximum Reverse Current Ta = 25 °C	I_R	1.0			mA
at Rated DC Blocking Voltage (Note 1) Ta = 100 °C	$I_{R(H)}$	10			mA
Typical Thermal Resistance (Note 2)	RθJL	15			°C/W
Typical Junction Capacitance (Note 3)	C_J	110			pF
Junction Temperature Range	T_J	- 65 to + 125			°C
Storage Temperature Range	T_{STG}	- 65 to + 125			°C

Notes :

(1) Pulse Test : Pulse Width = 300 μs, Duty Cycle = 2%.
(2) Thermal Resistance from junction to lead, PC board Mounting with 0.375" (9.5mm) Lead Lengths and 1.5 in^2 (38.1mm^2) copper pads.
(3) Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (1N5817 - 1N5819)

FIG.1 - FORWARD CURRENT DERATING CURVE

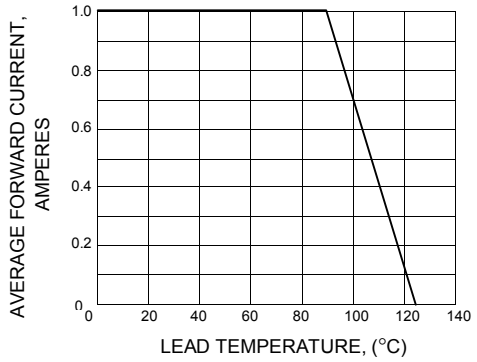


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

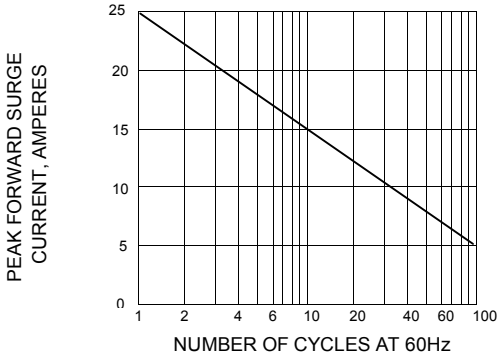


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

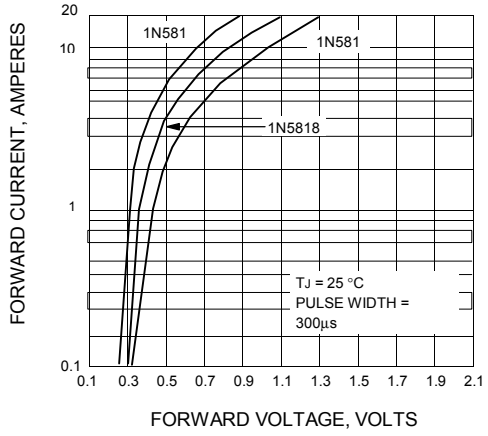


FIG.4 - TYPICAL REVERSE CHARACTERISTICS