TAIWAN SEMICONDUCTOR

The Smartest Choice

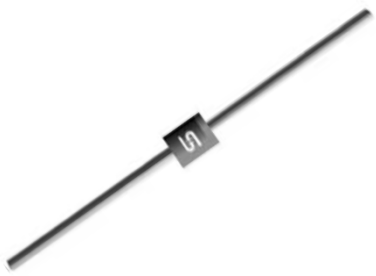
1N5817 - 1N5819

1.0AMP. Schottky Barrier Rectifiers

DO-41

Features

- ✧ Low power loss, high efficiency
- ✧ High current capability, Low VF
- ✧ High reliability
- ✧ High surge current capability
- ✧ Exitaxial construction
- ✧ Guard-ring for transient protection
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode



Pb-Free

RoHS COMPLIANT

Mechanical Data

- ✧ Cases: Molded plastic DO-41
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260℃/10 seconds/.375",(9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.33 grams

Ordering Information (example)

Part No.	Package	Packing	INNER TAPE	Packing code	Packing code (Green)
1N5817	DO-41	3K / AMMO box	52mm	A0	A0G

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	1N5817	1N5818	1N5819	Units
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 Rectified Current	$I_{F(AV)}$	1			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30			A
Maximum Instantaneous Forward Voltage (Note 1) @ 1 A	V_F	0.45	0.550	0.600	V
Maximum DC Reverse Current @ T_A=25 ℃ at Rated DC Blocking Voltage @ T_A=100 ℃	I_R	1 10			mA mA
Typical Junction Capacitance (Note 2)	Cj	55			pF
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JC}$	100 45			^{O}C/W
Operating Temperature Range	T_J	- 65 to + 125			^{O}C
Storage Temperature Range	T_{STG}	- 65 to + 150			^{O}C

Note 1: Pulse Test With PW=300 usec, 1% Duty Cycle

Note 2: Measure at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

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RATINGS AND CHARACTERISTIC CURVES (1N5817 THRU 1N5819)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

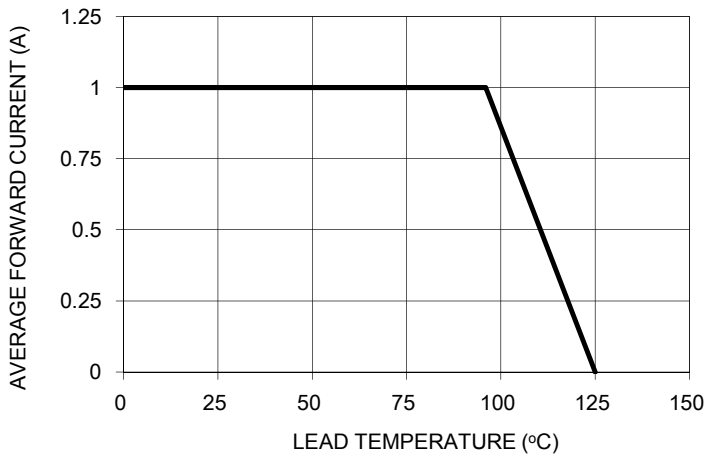


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

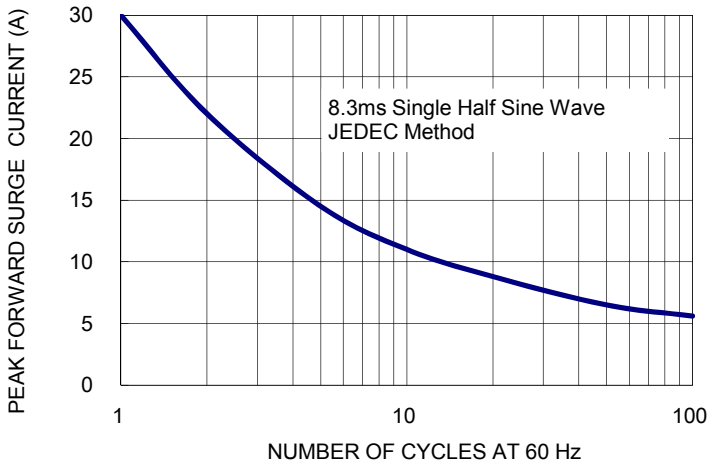


FIG. 3- TYPICAL FORWARD CHARACTERISRICS

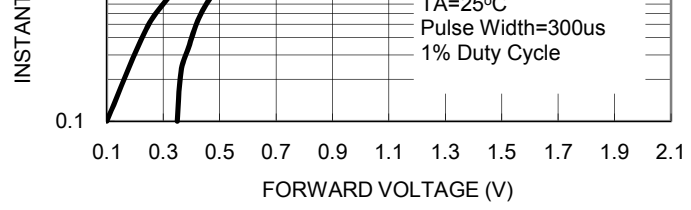


FIG. 4- TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

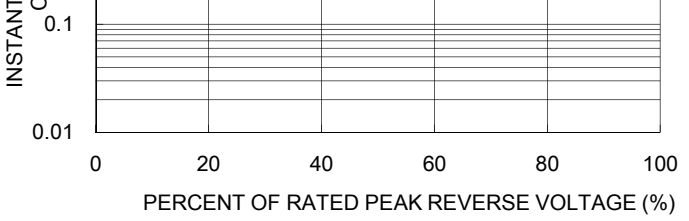


FIG. 5- TYPICAL JUNCTION CAPACITANCE

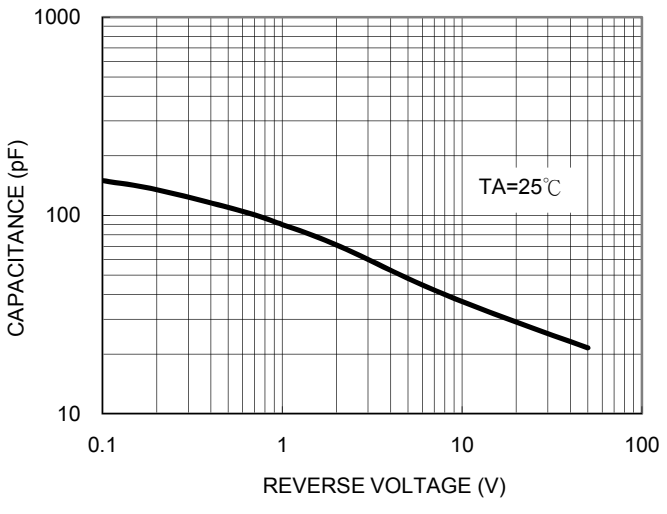
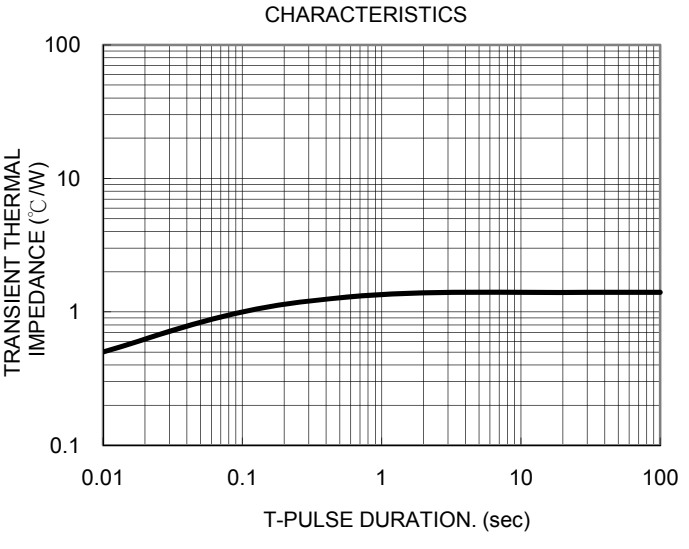


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS



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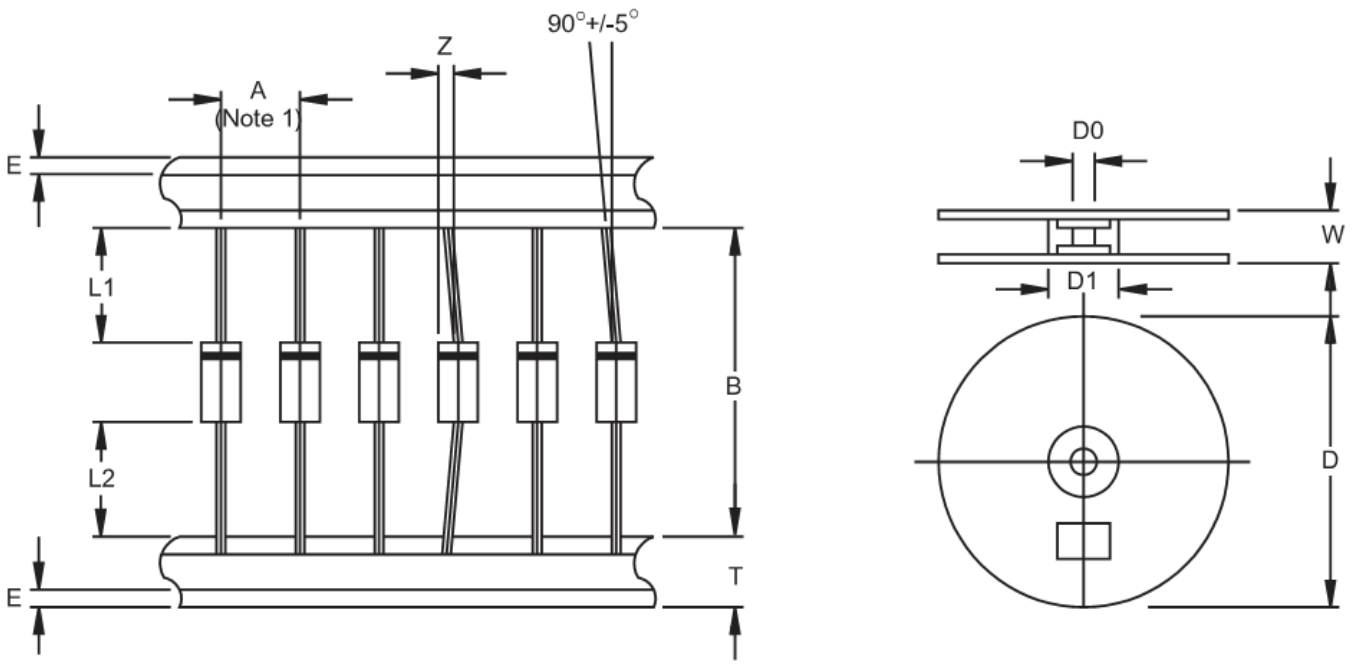
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Ordering information

Part No.	Package	Packing	INNER TAPE	Packing code	Packing code (Green)
1N581x	DO-41	3K / AMMO box	52mm	A0	A0G
	DO-41	3K / AMMO box	26mm	A1	A1G
	DO-41	5K / 13" Reel	52mm	R0	R0G
	DO-41	5K / 13" Reel	52mm	R1	R1G
	DO-41	1K / Bulk packing		B0	B0G

Note: "x" is Device Code from "7" thru "9".

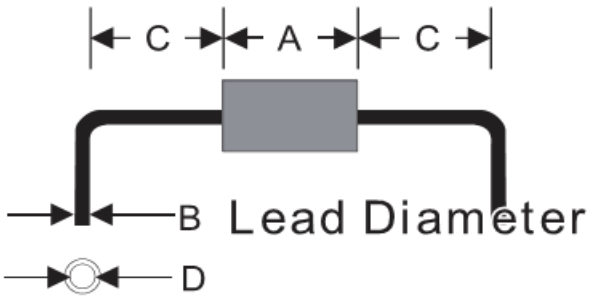
AXIAL LEAD TAPING SPECIFICATIONS



Outline	A	B	Z	T	E	L1-L2	D	D1	D0	W
	±0.5	±1.5	MAX	±0.4	MAX	MAX		±0.3	±0.4	±1.0
DO-41	5	26	1.2	6	0.8	1	330	85.7	16.6	76
DO-41	5	52.4	1.2	6	0.8	1	330	85.7	16.6	76

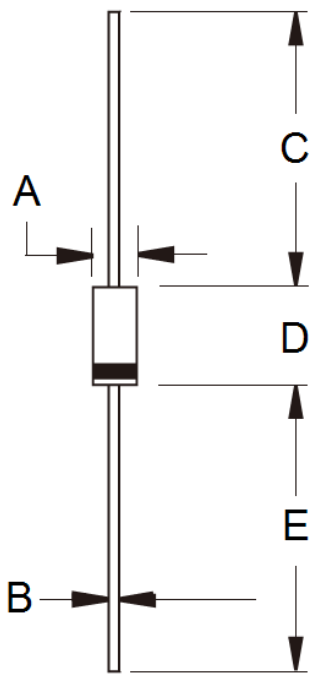
Unit (mm)

Suggested Mounting Hole Rule



Symbol	Unit(mm)
A	5.1
B	0.8
C	3.0
D	1.2

Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	2.00	2.70	0.079	0.106
B	0.71	0.86	0.028	0.034
C	25.40	-	1.000	-
D	4.20	5.20	0.165	0.205
E	25.40	-	1.000	-

Marking Diagram



P/N = Specific Device Code
G = Green Compound
YWW = Date Code