Schottky Barrier Rectifier

FEATURES

- Low forward voltage drop
- Guardring for overvoltage protection
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

DO-204AL (DO-41)

Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

Case: DO-204AL (DO-41)

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test,

Polarity: Indicated by cathode band

Weight: 0.33 gram (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)					
PARAMETER	SYMBOL	**1N5817**	**1N5818**	**1N5819**	Unit
Maximum repetitive 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	I_{FSM}	30			A
Maximum instantaneous forward voltage (Note 1) @ 1 A	V_F	0.45	0.55	0.60	V
Maximum reverse current @ rated VR T_J=25 ℃ T_J=100℃	I_R	1 10			mA
Typical junction capacitance (Note 2)	Cj	55			pF
Voltage rate of change (Rated V_R)	dV/dt	10000			V/μs
Typical thermal resistance	$R_{\theta JC}$ $R_{\theta JA}$	45 100			^{O}C/W
Operating junction temperature range	T_J	- 55 to +125			^{O}C
Storage temperature range	T_{STG}	- 55 to +125			^{O}C

Note 1: Pulse test with PW=300 μs, 1% duty cycle

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

ORDERING INFORMATION				
PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
1N581x (Note 1)	A0	Suffix "G"	DO-41	3,000 / AMMO box
	R0		DO-41	5,000 / 13" Reel
	R1		DO-41	5,000 / 13" Reel (Reverse)
	B0		DO-41	1,000 / Bulk packing

Note 1: "x" defines voltage from 20V (1N5817) to 40V (1N5819)

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
1N5817 A0	1N5817	A0		
1N5817 A0G	1N5817	A0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

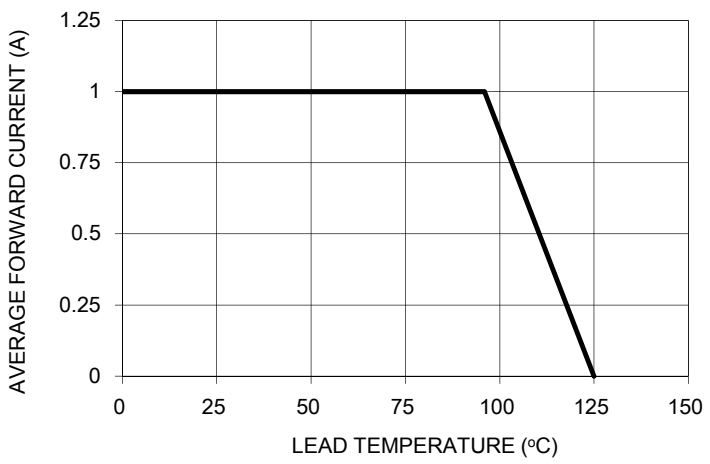


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

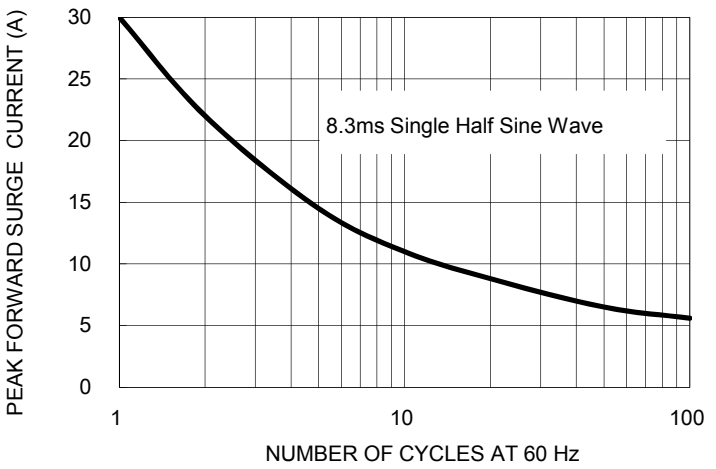


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

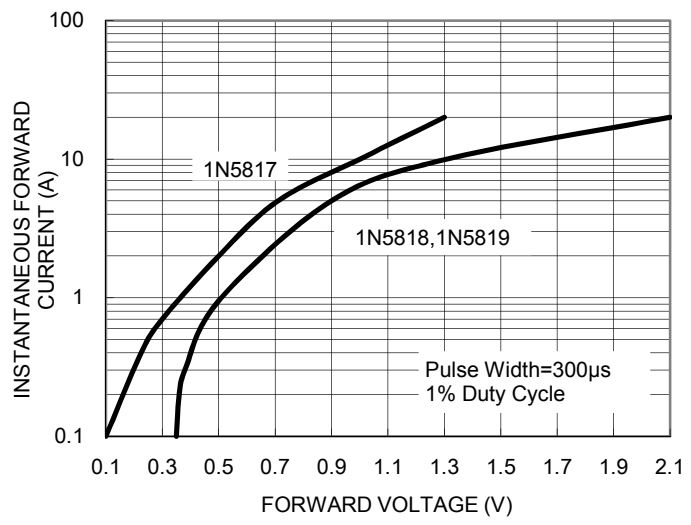


FIG. 4- TYPICAL REVERSE LEAKAGE CHARACTERISTICS

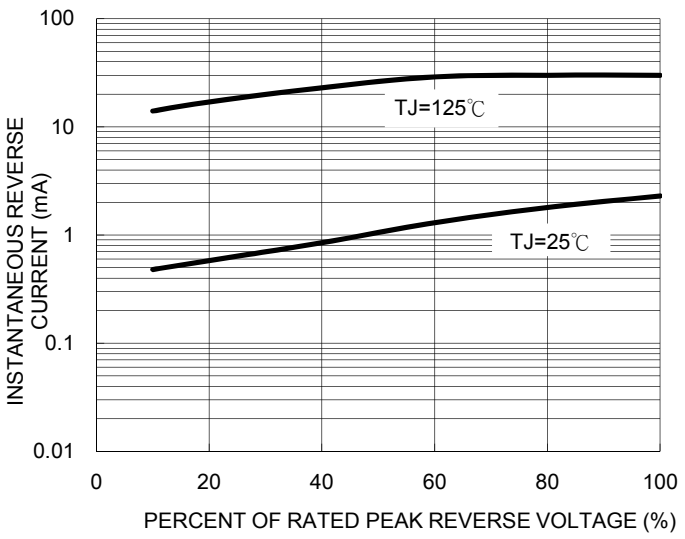


FIG. 5- TYPICAL JUNCTION CAPACITANCE

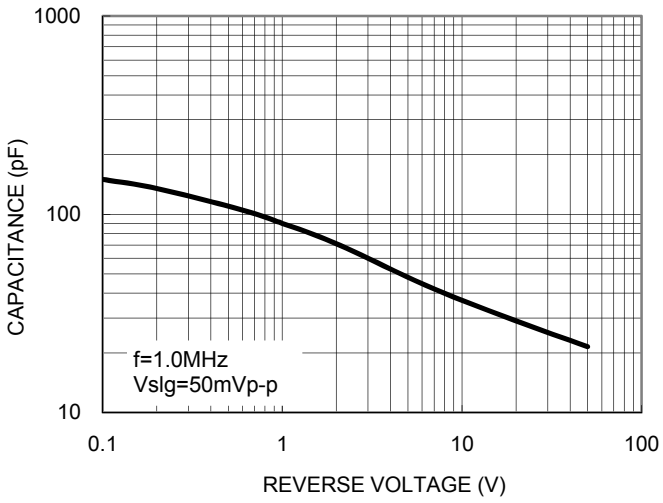
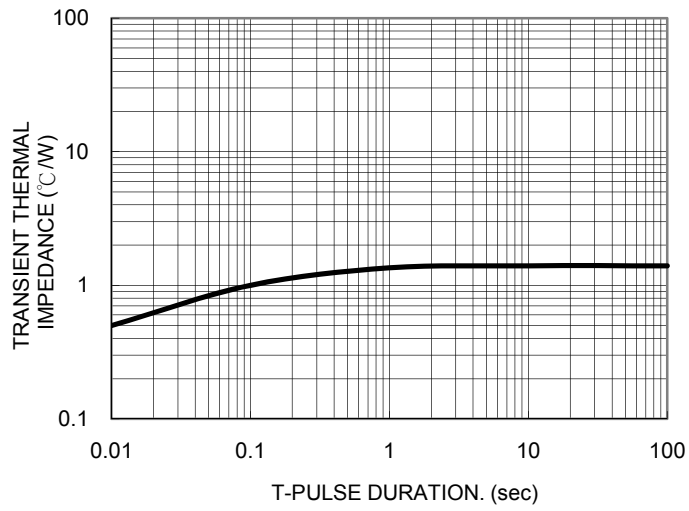
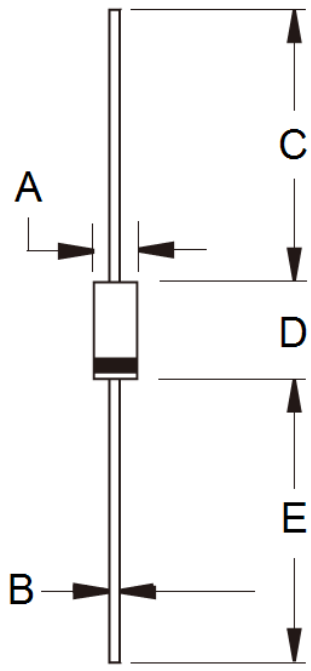


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS



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
F	= Factory Code

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied,to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or seling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.