

Silicon Rectifiers

FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- 3mm miniature body
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



MECHANICAL DATA

Case: TS-1

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - halogen-free

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

Meet JESD 201 class 1A whisker test

Weight: 0.2g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)									
PARAMETER	SYMBOL	1T1	1T2	1T3	1T4	1T5	1T6	1T7	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	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			1.0					V
Maximum reverse current @ rated VR $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R			5					μA
				50					
Typical junction capacitance (Note 2)	C_J			15					pF
Typical thermal resistance	$R_{\theta JA}$			50					$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J			- 55 to +150					$^\circ\text{C}$
Storage temperature range	T_{STG}			- 55 to +150					$^\circ\text{C}$

Note 1: Pulse test with $PW=300\ \mu\text{s}$, 1% duty cycle

Note 2: Measured at 1.0 MHz and Applied $V_R=4.0$ Volts

ORDERING INFORMATION

PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
1Tx (Note 1)	A0	Suffix "G"	TS-1	3,000 / Ammo box (52mm taping)
	A1		TS-1	3,000 / Ammo box (26mm taping)
	R0		TS-1	5,000 / 13" Paper reel
	B0		TS-1	1,000 / Bulk packing

Note 1: "x" defines voltage from 50V (1T1) to 1000V (1T7)

EXAMPLE

PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
1T7 A0	1T7	A0		
1T7 A0G	1T7	A0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

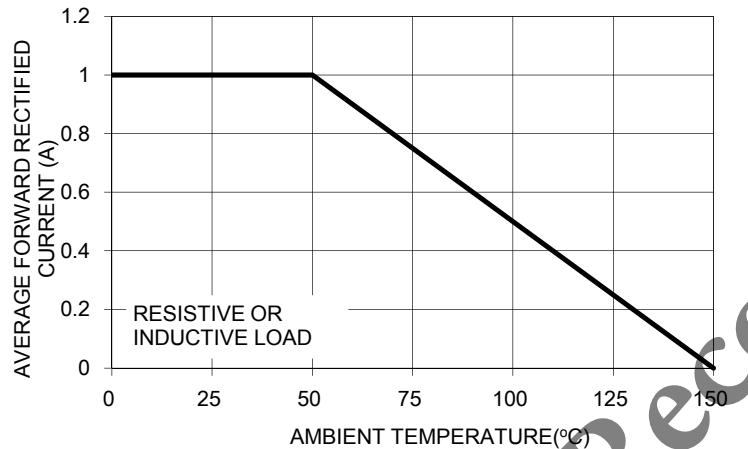
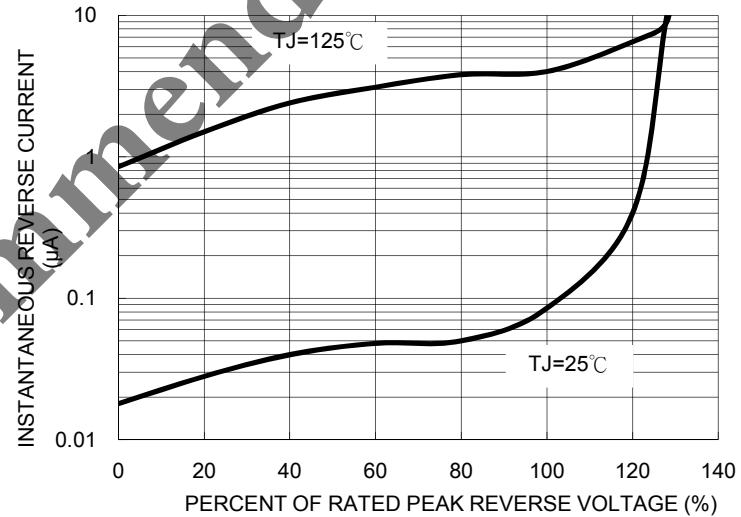
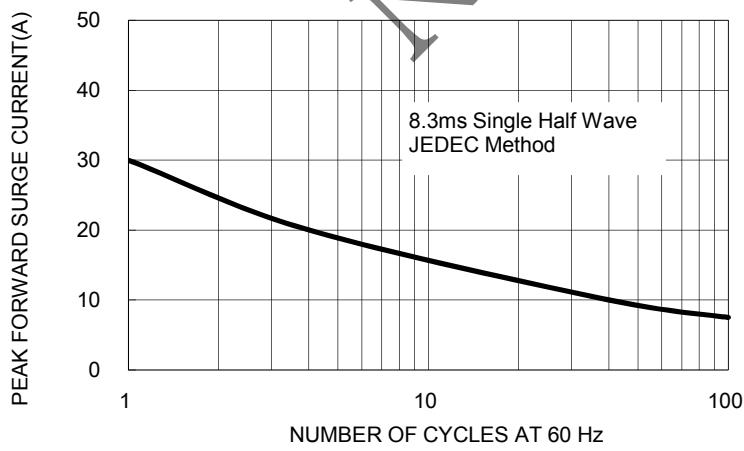
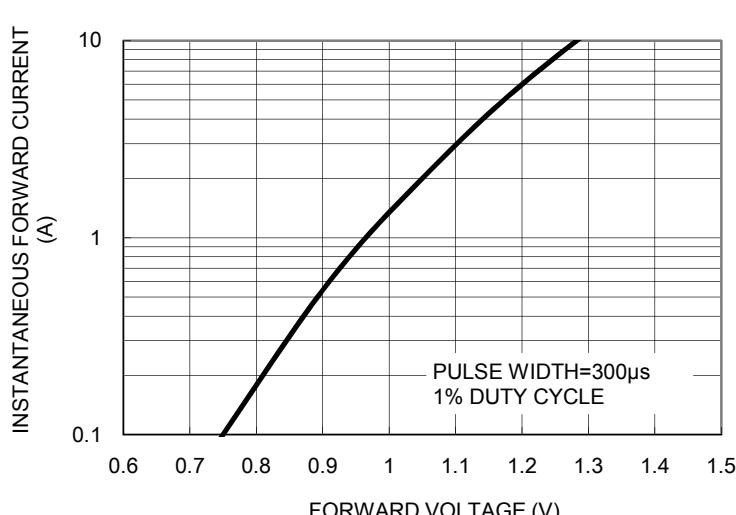
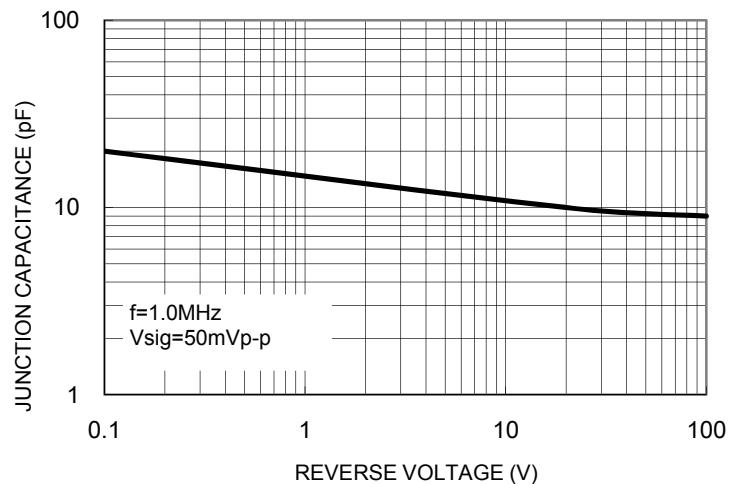
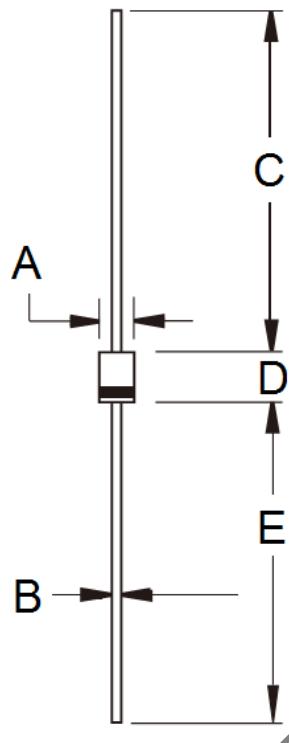
FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

FIG. 2- TYPICAL REVERSE CHARACTERISTICS

FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

FIG. 4- TYPICAL FORWARD CHARACTERISTICS


FIG. 5- TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.00	2.70	0.079	0.106
B	0.53	0.64	0.021	0.025
C	25.40	-	1.000	-
D	3.00	3.30	0.118	0.130
E	25.40	-	1.000	-

MARKING DIAGRAM



P/N = Specific Device Code
 G = Green Compound
 YW = Date Code
 F = Factory Code

Not Recommended

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