

## Schottky Barrier Rectifier

### FEATURES

- Low forward voltage drop
- Low power loss, high efficiency
- 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



TS-1

### MECHANICAL DATA

**Case:** TS-1

Molding compound, UL flammability classification rating 94V-0

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

Base P/N with prefix "H" on packing code - AEC-Q101 qualified

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

Meet JESD 201 class 1A whisker test,

with prefix "H" on packing code meet JESD 201 class 2 whisker test

**Weight:** 0.2g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)										
PARAMETER	SYMBOL	SRT 12	SRT 13	SRT 14	SRT 15	SRT 16	SRT 19	SRT 110	SRT 115	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	90	100	150	V
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	63	70	105	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	90	100	150	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	1								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	25								A
Maximum instantaneous forward voltage (Note 1) @ 1 A	V <sub>F</sub>	0.55		0.70		0.80		0.90		V
Maximum reverse current @ rated VR T <sub>J</sub> =25 °C T <sub>J</sub> =100 °C T <sub>J</sub> =125 °C	I <sub>R</sub>	0.5				0.1				mA
		10		5		-		2		
		-		-		-				
Typical junction capacitance (Note 2)	C <sub>j</sub>	110		80		28		pF		
Typical thermal resistance	R <sub>θJA</sub>	50								°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +125				- 55 to +150				°C
Storage temperature range	T <sub>STG</sub>	- 55 to +150								°C

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

Note 2: Measured at 1.0 MHz and Applied V<sub>R</sub>=4.0 Volts

ORDERING INFORMATION					
PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
SRT1xx (Note 1)	Prefix "H"	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: "xx" defines voltage from 20V (SRT12) to 150V (SRT115)

EXAMPLE					
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
SRT16 A0	SRT16		A0		
SRT16 A0G	SRT16		A0	G	Green compound
SRT16HA0	SRT16	H	A0		AEC-Q101 qualified

**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

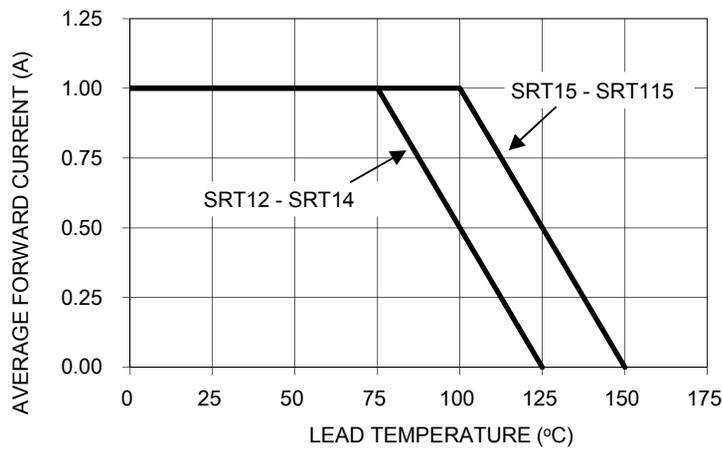


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

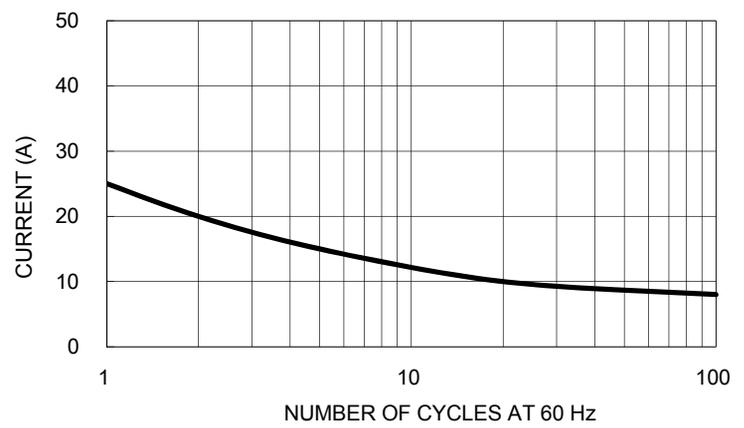


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

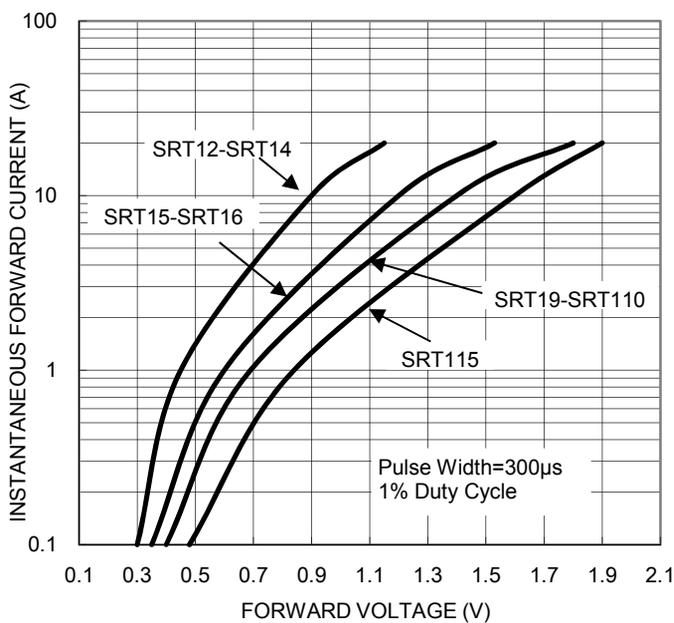


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

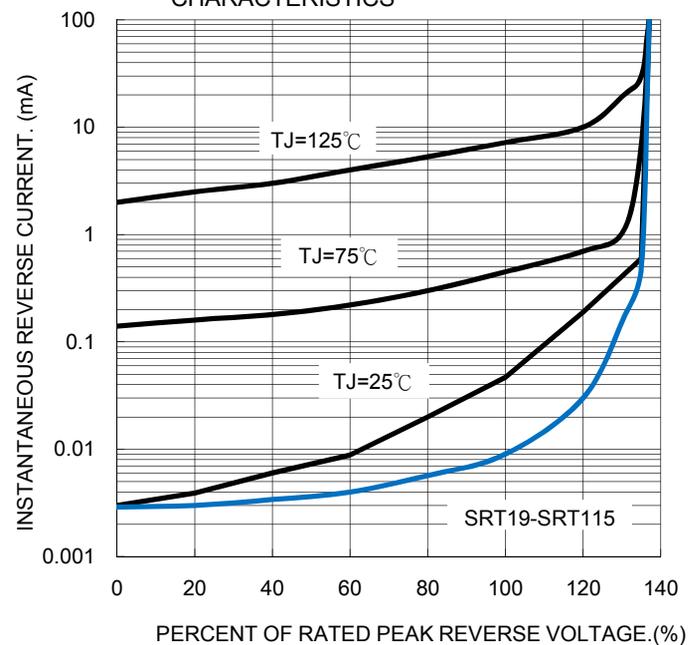


FIG. 5- TYPICAL JUNCTION CAPACITANCE

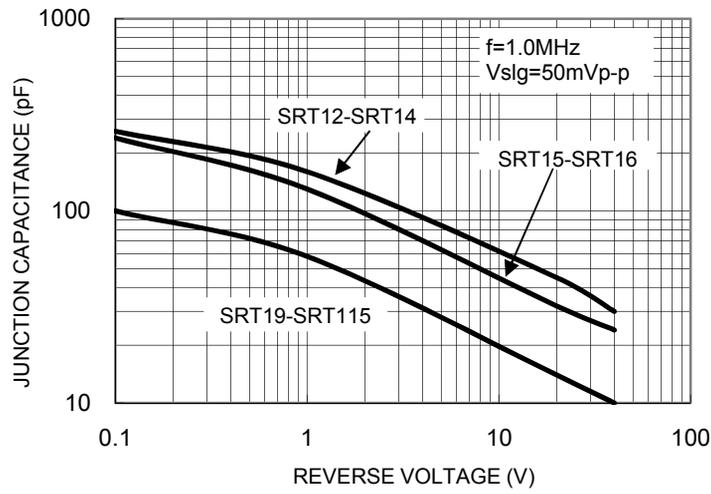
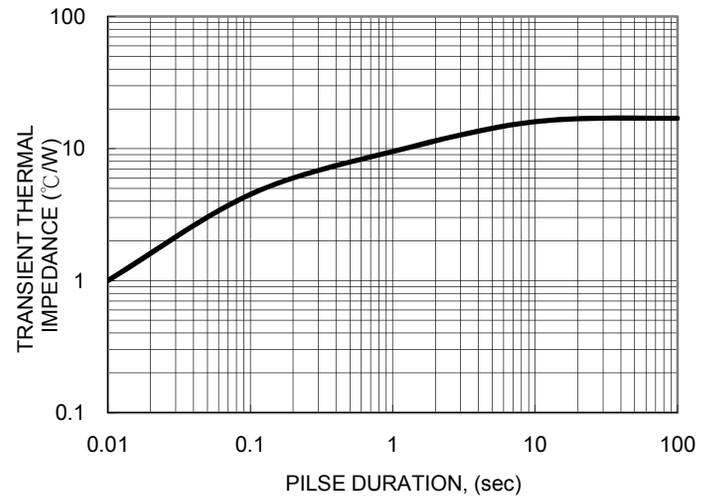
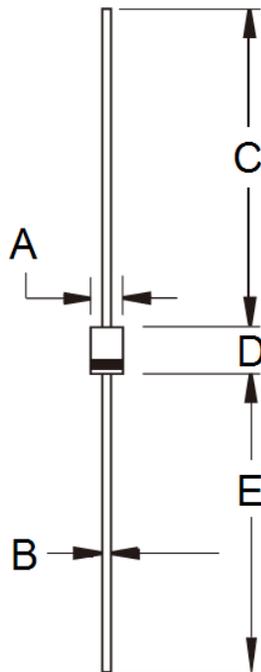


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS



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

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