后芮驷(上海)电子有限公司

Horus International Electronics Co., LTD.

承认书

SPECIFICATION FOR APPROVAL

编号:

品名 DESCRIPTION： SMT Transient Voltage Suppressor

规格 SPEC : HRS-RCA-SM8S SERIES

包装 PACKAGE: 卷装

客户 CUSTOMER：

客户料号 CUSTOMER P/N:

APPROVED BY	
CUSTOMER	HORUS

DATA SHEET

SMT Transient Voltage Suppressor

P/N: RCA-SM8S SERIES

AEC-Q101

*Content in this sheet are subject to change without prior notice

Features

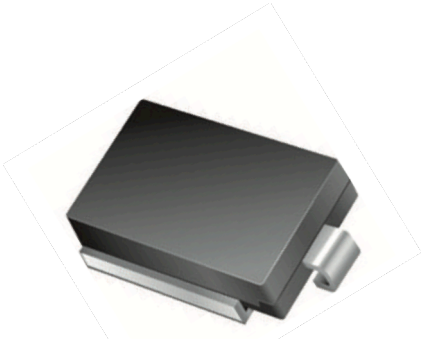
6600W peak pulse power capability at 10/1000μs waveform, repetition rate (duty cycles):0.01%

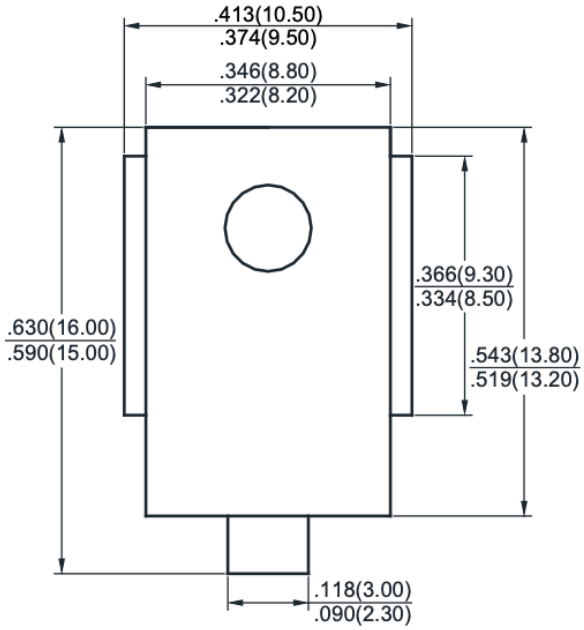
- High surge capability
- Low leakage current
- Low forward voltage drops
- Excellent clamping capability
- Very fast response time
- Halogen free and RoHS compliant
- Meets ISO7637-2 surge specification
- Automotive certification approved for AEC-Q101

Applications

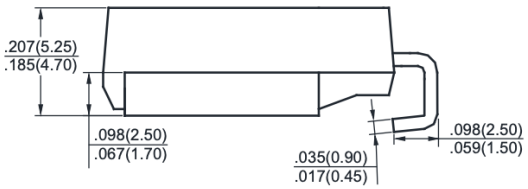
- Working Voltage 10 to 64 V Peak Pulse Power 6600W
- Solve ISO 7637-2 5a/5b and ISO 16750 Load Dump Effectively

Construction





Anode ○—▶|—○ Cathode



Dimensions in inches and (millimeters)

Mechanical Data

Case: Molded plastic, DO-218AB

Epoxy: UL 94V-0 rate flame retardant

Terminals: Solderable per MIL-STD-750, method 2026

Polarity: Heatsink is anode

MAXIMUM RATINGS AND THERMAL CHARACTERISTICS (TA = 25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Peak power dissipation @10/1000 μs waveform @10/10000 μs waveform	P_{PPM}	6600 5200	W
Peak forward surge current, 8.3 ms single half sine-wave (Note 1)	I_{FSM}	700	A
Power dissipation on infinite heatsink at T_C=25°C (Fig.1)	P_D	8	W
Maximum instantaneous forward voltage at 100A for unidirectional only	V_F	1.8	V
Operating junction and storage temperature range	T_J , T_{STG}	-55 to +175	°C

NOTES : (1) Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only, duty cycle=4 per minute maximum

Part Number (Uni)	Breakdown Voltage VBR@IT			IR@VRWM (μA) Max.	VRWM (V)	IPP (A) Max.	VC@IPP (V) Max.
	Min (V)	Max (V)	I_T (mA)				
RCA-SM8S10A	11.1	12.3	5	5	10	388	17.0
RCA-SM8S11A	12.2	13.5	5	5	11	363	18.2
RCA-SM8S12A	13.3	14.7	5	5	12	332	19.9
RCA-SM8S13A	14.4	15.9	5	5	13	307	21.5
RCA-SM8S14A	15.6	17.2	5	5	14	284	23.2
RCA-SM8S15A	16.7	18.5	5	5	15	270	24.4
RCA-SM8S16A	17.8	19.7	5	5	16	253	26.0
RCA-SM8S17A	18.9	20.9	5	5	17	239	27.6
RCA-SM8S18A	20.0	22.1	5	5	18	226	29.2
RCA-SM8S20A	22.2	24.5	5	5	20	204	32.4
RCA-SM8S22A	24.4	26.9	5	5	22	186	35.5
RCA-SM8S24A	26.7	29.5	5	5	24	170	38.9
RCA-SM8S26A	28.9	31.9	5	5	26	157	42.1
RCA-SM8S28A	31.1	34.4	5	5	28	145	45.4
RCA-SM8S30A	33.3	36.8	5	5	30	136	48.4
RCA-SM8S33A	36.7	40.6	5	5	33	124	53.3
RCA-SM8S36A	40.0	44.2	5	5	36	114	58.1
RCA-SM8S40A	44.4	49.1	5	5	40	102	64.5
RCA-SM8S43A	47.8	52.8	5	5	43	95.1	69.4
RCA-SM8S48A	53.3	58.9	5	5	48	85.3	77.4
RCA-SM8S58A	64.4	71.2	5	5	58	70.5	93.6
RCA-SM8S64A	71.1	78.6	5	5	64	64.1	103

Part Number (Bi)	Breakdown Voltage VBR@IT			IR@VRWM (μA) Max.	VRWM (V)	IPP (A) Max.	VC@IPP (V) Max.
	Min (V)	Max (V)	IT (mA)				
RCA-SM8S12CA	13.3	14.7	5	5	12	332	19.9
RCA-SM8S13CA	14.4	15.9	5	5	13	307	21.5
RCA-SM8S14CA	15.6	17.2	5	5	14	284	23.2
RCA-SM8S15CA	16.7	18.5	5	5	15	270	24.4
RCA-SM8S16CA	17.8	19.7	5	5	16	253	26.0
RCA-SM8S17CA	18.9	20.9	5	5	17	239	27.6
RCA-SM8S18CA	20.00	22.1	5	5	18	226	29.2
RCA-SM8S20CA	22.2	24.5	5	5	20	204	32.4
RCA-SM8S22CA	24.4	26.9	5	5	22	186	35.5
RCA-SM8S24CA	26.7	29.5	5	5	24	170	38.9
RCA-SM8S26CA	28.9	31.9	5	5	26	157	42.1
RCA-SM8S28CA	31.1	34.4	5	5	28	145	45.4
RCA-SM8S30CA	33.3	36.8	5	5	30	136	48.4
RCA-SM8S33CA	36.7	40.6	5	5	33	124	53.3
RCA-SM8S36CA	40.0	44.2	5	5	36	114	58.1

RATINGS AND CHARACTERISTICS CURVES SM8S SERIES

Fig.1 - Steady State Power Derating Curve

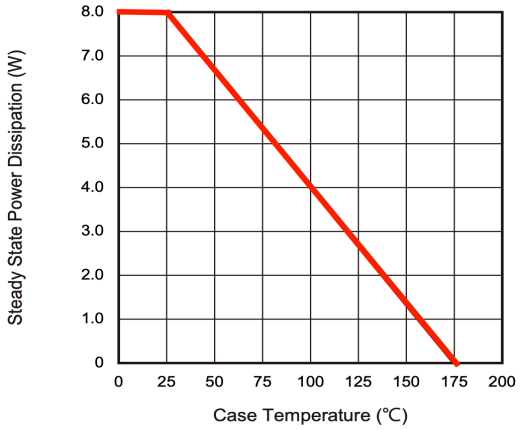


Fig.2 - Load Dump Power Characteristics
(10ms Exponential Waveform)

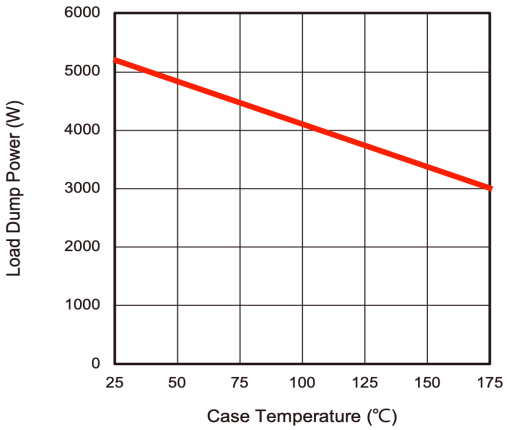


Fig.3 - Pulse Waveform

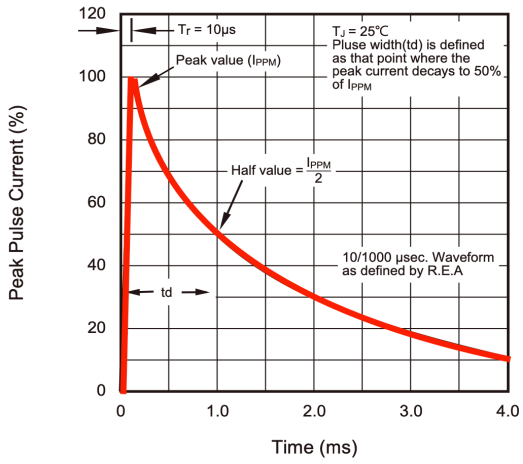


Fig.4 - Peak Pulse Power Rating Curve

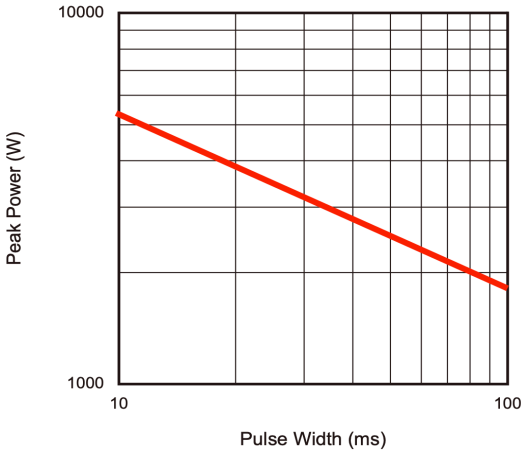
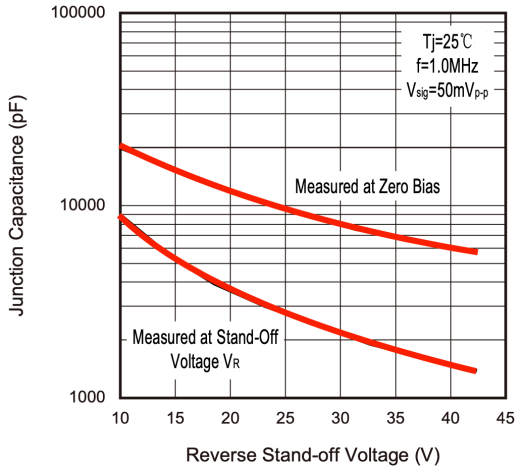
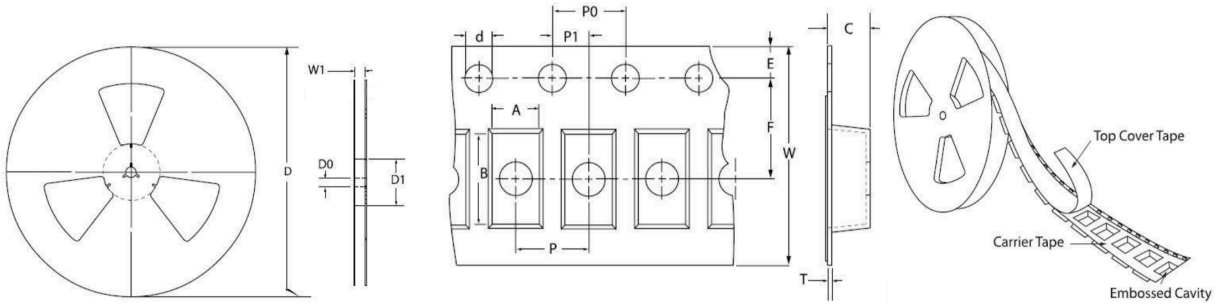


Fig.5 - Typical Junction Capacitance



Tape & Reel Specifications



A	B	C	d	D	D0	D1	E	F	P	P0	P1	T	W	W1
10.80±0.15	16.35±0.15	6.00±0.15	1.5±0.1	330±3.0	13.5±1	61(Min.)	1.75±0.1	11.5±0.1	16.0±0.1	4.0±0.1	2.0±0.1	0.6(Max.)	24.0±0.3	25.0±0.3

Application Notice

Storage Conditions To maintain the solder ability of terminal electrodes:
1. RDM products meet IPC/JEDEC J-STD-020D standard-MSL, level 1.
2. Temperature and humidity conditions: -10~ 40°C and 30~70% RH.
3. Recommended products should be used within 6 months from the time of delivery.
4. The packaging material should be kept where no chlorine or sulfur exists in the air.
· Transportation
1.Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

Modify records:

Version	Page	Description
V01	N/A	New issued