

# AUTOMOTIVE TRANSIENT VOLTAGE SUPPRESSOR PEAK PULSE POWER-400 Watts

## FEATURES

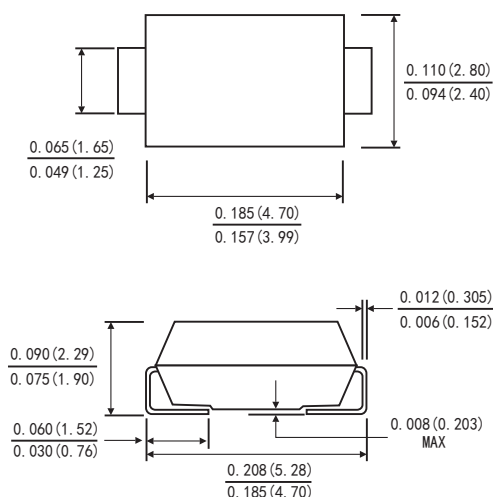
- 400 Watts Pulse capability
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU
- AEC-Q101 qualified and PPAP capable



**AEC-Q101 Qualified**



## SMA(DO-214AC)



Dimensions in inches and (millimeters)

## MECHANICAL DATA

- Case: JEDEC SMA(DO-214AC) molded plastic body
- Terminals: Solder Plated
- Polarity: By cathode band denotes uni-directional device, none cathode band denotes bi-directional device.

## DEVICES FOR BIDIRECTIONAL APPLICATIONS

1. For bi-directional use C suffix for Types .
2. Electrical characteristics apply in both directions.

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified)

	Symbols	Value	Units
Peak Pulse Power Dissipation at on 10/1000µs Waveform (Note 1, 2)	PPK	400	Watts
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) (Note 2, 3)	IFSM	100	Amps
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to 150	°C

Note: 1. Non repetitive current pulse and derated above T<sub>A</sub>=25°C

2. Mounted on copper pads area of 0.2X0.2" (5X5mm)

3. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum



Part number		Reverse Standoff Voltage VRWM (Volts)	Breakdown Voltage VBR (Volts)		Test Current (mA)	Maximum Clamping Voltage VC@Ipp (Volts)	Maximum Peak Pulse Current Ipp(A)	Maximum Reverse Leakage IR@VRWM (μA)
UNI	BI		MIN	MAX				
SMAJ5.0A-V	SMAJ5.0CA-V	5.00	6.40	7.00	10	9.2	43.5	3σ值
SMAJ6.0A-V	SMAJ6.0CA-V	6.00	6.67	7.37	10	10.3	38.8	3σ值
SMAJ6.5A-V	SMAJ6.5CA-V	6.50	7.22	7.98	10	11.2	35.7	3σ值
SMAJ7.0A-V	SMAJ7.0CA-V	7.00	7.78	8.60	10	12.0	33.3	3σ值
SMAJ7.5A-V	SMAJ7.5CA-V	7.50	8.33	9.21	1	12.9	31.0	3σ值
SMAJ8.0A-V	SMAJ8.0CA-V	8.00	8.89	9.83	1	13.6	29.4	3σ值
SMAJ8.5A-V	SMAJ8.5CA-V	8.50	9.44	10.40	1	14.4	27.8	3σ值
SMAJ9.0A-V	SMAJ9.0CA-V	9.00	10.00	11.10	1	15.4	26.0	3σ值
SMAJ10A-V	SMAJ10CA-V	10.50	11.10	12.30	1	17.0	23.5	1
SMAJ11A-V	SMAJ11CA-V	11.55	12.20	13.50	1	18.2	22.0	1
SMAJ12A-V	SMAJ12CA-V	12.60	13.30	14.70	1	19.9	20.1	1
SMAJ13A-V	SMAJ13CA-V	13.65	14.40	15.90	1	21.5	18.6	1
SMAJ14A-V	SMAJ14CA-V	14.70	15.60	17.20	1	23.2	17.2	1
SMAJ15A-V	SMAJ15CA-V	15.75	16.70	18.50	1	24.4	16.4	1
SMAJ16A-V	SMAJ16CA-V	16.80	17.80	19.70	1	26.0	15.4	1
SMAJ17A-V	SMAJ17CA-V	17.85	18.90	20.90	1	27.6	14.5	1
SMAJ18A-V	SMAJ18CA-V	18.90	20.00	22.10	1	29.2	13.7	1
SMAJ20A-V	SMAJ20CA-V	21.00	22.20	24.50	1	32.4	12.3	1
SMAJ22A-V	SMAJ22CA-V	23.10	24.40	26.90	1	35.5	11.3	1
SMAJ24A-V	SMAJ24CA-V	25.20	26.70	29.50	1	38.9	10.3	1
SMAJ26A-V	SMAJ26CA-V	27.30	28.90	31.90	1	42.1	9.5	1
SMAJ28A-V	SMAJ28CA-V	29.40	31.10	34.40	1	45.4	8.8	1
SMAJ30A-V	SMAJ30CA-V	31.50	33.30	36.80	1	48.4	8.3	1
SMAJ33A-V	SMAJ33CA-V	34.65	36.70	40.60	1	53.3	7.5	1
SMAJ36A-V	SMAJ36CA-V	37.80	40.00	44.20	1	58.1	6.9	1
SMAJ40A-V	SMAJ40CA-V	42.00	44.40	49.10	1	64.5	6.2	1
SMAJ43A-V	SMAJ43CA-V	45.15	47.80	52.80	1	69.4	5.8	1
SMAJ45A-V	SMAJ45CA-V	47.25	50.00	55.30	1	72.7	5.5	1
SMAJ48A-V	SMAJ48CA-V	50.40	53.30	58.90	1	77.4	5.2	1
SMAJ51A-V	SMAJ51CA-V	53.55	56.70	62.70	1	82.4	4.9	1
SMAJ54A-V	SMAJ54CA-V	56.70	60.00	66.30	1	87.1	4.6	1



SMAJ58A-V	SMAJ58CA-V	60.90	64.40	71.20	1	93.6	4.3	1
SMAJ60A-V	SMAJ60CA-V	63.00	66.70	73.70	1	96.8	4.1	1
SMAJ64A-V	SMAJ64CA-V	67.20	71.10	78.60	1	103.0	3.9	1
SMAJ70A-V	SMAJ70CA-V	73.50	77.80	86.00	1	113.0	3.5	1
SMAJ75A-V	SMAJ75CA-V	78.75	83.30	92.10	1	121.0	3.3	1
SMAJ78A-V	SMAJ78CA-V	81.90	86.70	95.80	1	126.0	3.2	1
SMAJ85A-V	SMAJ85CA-V	89.25	94.40	104.00	1	137.0	2.9	1
SMAJ90A-V	SMAJ90CA-V	94.50	100.00	111.00	1	146.0	2.7	1
SMAJ100A-V	SMAJ100CA-V	105.00	111.00	123.00	1	162.0	2.5	1
SMAJ110A-V	SMAJ110CA-V	115.50	122.00	135.00	1	177.0	2.3	1
SMAJ120A-V	SMAJ120CA-V	126.00	133.00	147.00	1	193.0	2.1	1
SMAJ130A-V	SMAJ130CA-V	136.50	144.00	159.00	1	209.0	1.9	1
SMAJ150A-V	SMAJ150CA-V	157.50	167.00	185.00	1	243.0	1.6	1
SMAJ160A-V	SMAJ160CA-V	168.00	178.00	197.00	1	259.0	1.5	1
SMAJ170A-V	SMAJ170CA-V	178.50	189.00	209.00	1	275.0	1.5	1
SMAJ180A-V	SMAJ180CA-V	189.00	201.00	222.00	1	292.0	1.4	1
SMAJ190A-V	SMAJ190CA-V	199.50	211.00	233.00	1	306.0	1.3	1
SMAJ200A-V	SMAJ200CA-V	210.00	224.00	247.00	1	324.0	1.2	1
SMAJ210A-V	SMAJ210CA-V	220.50	233.00	258.00	1	324.0	1.1	1
SMAJ220A-V	SMAJ220CA-V	231.00	246.00	272.00	1	356.0	1.1	1
SMAJ250A-V	SMAJ250CA-V	262.50	279.00	309.00	1	405.0	1.0	1
SMAJ300A-V	SMAJ300CA-V	315.00	335.00	371.00	1	486.0	0.8	1
SMAJ350A-V	SMAJ350CA-V	367.50	391.00	432.00	1	567.0	0.7	1
SMAJ400A-V	SMAJ400CA-V	420.00	447.00	494.00	1	648.0	0.6	1
SMAJ440A-V	SMAJ440CA-V	462.00	492.00	543.00	1	713.0	0.6	1

For Bi-directional type having VRWM of 10 Volts and less, the IR limit is double

- 1.A transient suppressor is normally selected according to the working peak reverse voltage (VRWM), which should be equal to or greater than the DC or continuous peak operating voltage level.
- 2.VBR measured at pulse test current IT at an ambient temperature of 25°C.
- 3.Surge current waveform per Figure 2 and derate per Figure 3

FIG. 1-PEAK PULSE POWER CURVE

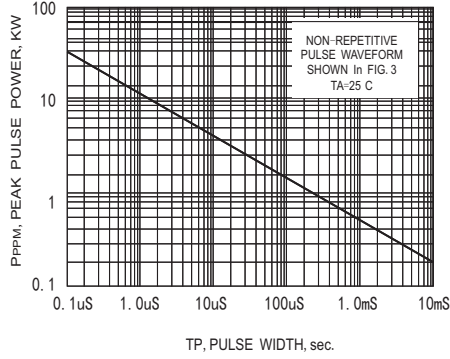


FIG. 2-PULSE DERATING CURVE

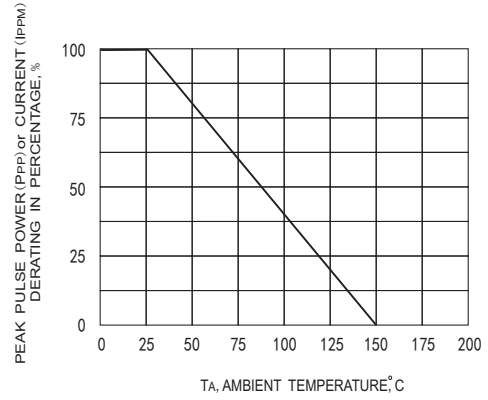


FIG. 3-PULSE WAVEFORM

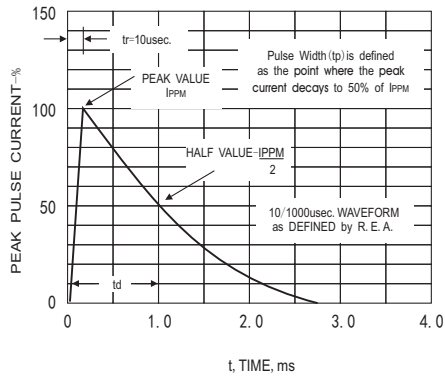


FIG. 4-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

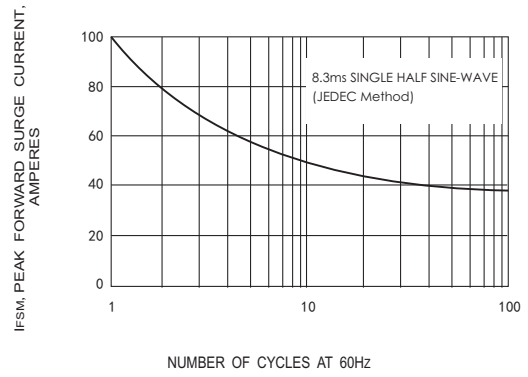


FIG. 5-Steady State Power Derating Curve

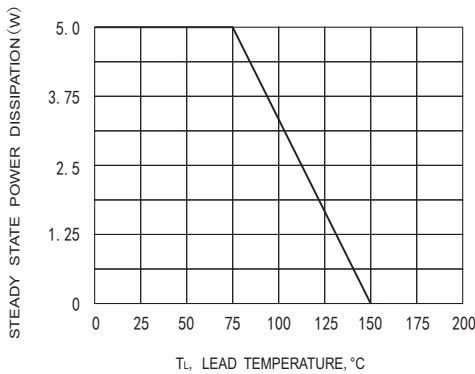


FIG. 6-TYPICAL JUNCTION CAPACITANCE

