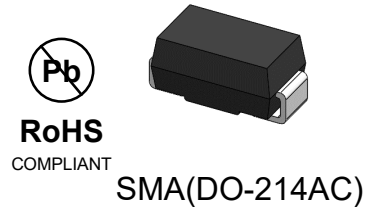


## 400W, 11 - 200V Transient Voltage Suppressors

### Features

- Very fast response time
- Glass passivated junction
- Moisture sensitivity: level 1, per J-STD-020
- Available in unidirectional and bidirectional
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21 definition
- 400 W peak pulse power capability with a 10/1000  $\mu$ s waveform
- AEC-Q101 qualified



### Applications

- SMPS
- Adapters
- Monitor

<b>Absolute Maximum Ratings</b> (TA=25°C unless otherwise noted)			
Parameter	Symbol	Ratings	Unit
Peak power dissipation with a 10/1000us waveform	P <sub>PPM</sub>	400	W
Peak pulse current with a 10/1000us waveform	I <sub>PPM</sub>	See Next Table	A
Power dissipation, on infinite heat sink at T <sub>L</sub> =75°C	P <sub>D</sub>	3	W
Peak forward surge current, 8.3ms single half-sine wave	I <sub>FSM</sub>	40	A
Typical Thermal Resistance , Junction to Ambient	R <sub>θJA</sub>	90	°C/W
Typical Thermal Resistance , Junction to Case	R <sub>θJC</sub>	20	°C/W
Typical Thermal Resistance , Junction to Lead	R <sub>θJL</sub>	25	°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C



## Electrical Characteristics (TA = 25 °C unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Marking		Breakdown Voltage VBR (Volts)		Test Current IT (mA)	Stand off Voltage VWM (Volts)	Maximum reverse leakage at VWM ID (µA)	Maximum Peak Pulse Current IppM (A)	Maximum Clamping Voltage at IppM Vc(Volts)
		UNI	BI	Min	Max					
AP4SMA12A	AP4SMA12CA	12A	12C	11.4	12.6	1.0	10.2	1.0	24.0	16.7
AP4SMA13A	AP4SMA13CA	13A	13C	12.4	13.7	1.0	11.1	1.0	22.0	18.2
AP4SMA15A	AP4SMA15CA	15A	15C	14.3	15.8	1.0	12.8	1.0	18.9	21.2
AP4SMA16A	AP4SMA16CA	16A	16C	15.2	16.8	1.0	13.6	1.0	17.8	22.5
AP4SMA18A	AP4SMA18CA	18A	18C	17.1	18.9	1.0	15.3	1.0	15.9	25.2
AP4SMA20A	AP4SMA20CA	20A	20C	19.0	21.0	1.0	17.1	1.0	14.4	27.7
AP4SMA22A	AP4SMA22CA	22A	22C	20.9	23.1	1.0	18.8	1.0	13.1	30.6
AP4SMA24A	AP4SMA24CA	24A	24C	22.8	25.2	1.0	20.5	1.0	12.0	33.2
AP4SMA27A	AP4SMA27CA	27A	27C	25.7	28.4	1.0	23.1	1.0	10.7	37.5
AP4SMA30A	AP4SMA30CA	30A	30C	28.5	31.5	1.0	25.6	1.0	9.7	41.4
AP4SMA33A	AP4SMA33CA	33A	33C	31.4	34.7	1.0	28.2	1.0	8.8	45.7
AP4SMA36A	AP4SMA36CA	36A	36C	34.2	37.8	1.0	30.8	1.0	8.0	49.9
AP4SMA39A	AP4SMA39CA	39A	39C	37.1	41.0	1.0	33.3	1.0	7.4	53.9
AP4SMA43A	AP4SMA43CA	43A	43C	40.9	45.2	1.0	36.8	1.0	6.7	59.3
AP4SMA47A	AP4SMA47CA	47A	47C	44.7	49.4	1.0	40.2	1.0	6.2	64.8
AP4SMA51A	AP4SMA51CA	51A	51C	48.5	53.6	1.0	43.6	1.0	5.7	70.1
AP4SMA56A	AP4SMA56CA	56A	56C	53.2	58.8	1.0	47.8	1.0	5.2	77.0
AP4SMA62A	AP4SMA62CA	62A	62C	58.9	65.1	1.0	53.0	1.0	4.7	85.0
AP4SMA68A	AP4SMA68CA	68A	68C	64.6	71.4	1.0	58.1	1.0	4.3	92.0
AP4SMA75A	AP4SMA75CA	75A	75C	71.3	78.8	1.0	64.1	1.0	3.9	103
AP4SMA82A	AP4SMA82CA	82A	82C	77.9	86.1	1.0	70.1	1.0	3.5	113
AP4SMA91A	AP4SMA91CA	91A	91C	86.5	95.5	1.0	77.8	1.0	3.2	125
AP4SMA100A	AP4SMA100CA	100A	100C	95	105	1.0	85.5	1.0	3.0	137
AP4SMA110A	AP4SMA110CA	110A	110C	105	116	1.0	94.0	1.0	2.7	152
AP4SMA120A	AP4SMA120CA	120A	120C	114	126	1.0	102	1.0	2.5	165
AP4SMA130A	AP4SMA130CA	130A	130C	124	137	1.0	111	1.0	2.3	179
AP4SMA150A	AP4SMA150CA	150A	150C	143	158	1.0	128	1.0	2.0	207
AP4SMA160A	AP4SMA160CA	160A	160C	152	168	1.0	136	1.0	1.9	219
AP4SMA170A	AP4SMA170CA	170A	170C	162	179	1.0	145	1.0	1.8	234
AP4SMA180A	AP4SMA180CA	180A	180C	171	189	1.0	154	1.0	1.7	246
AP4SMA200A	AP4SMA200CA	200A	200C	190	210	1.0	171	1.0	1.5	274

Note:

1. Mounted on copper pad area of 0.2x0.2" (5.0 x 5.0mm) to each terminal.

## Ratings and Characteristics Curves

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

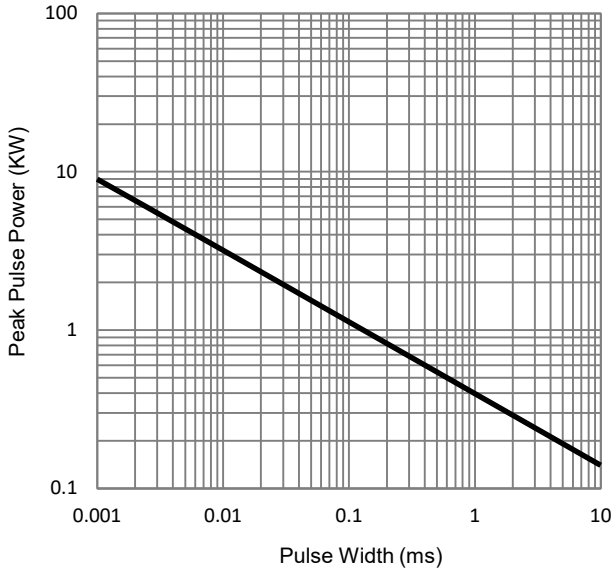


Fig.1 - Peak Pulse Power Derating Curve

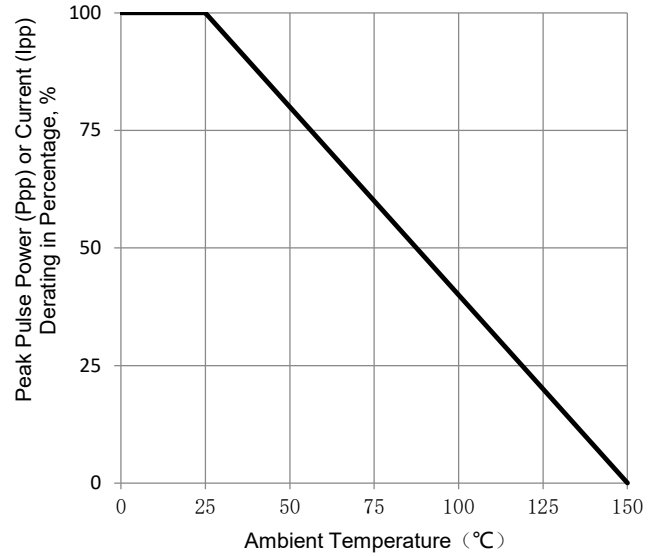


Fig.2 - Maximum Non-Repetitive Surge Current

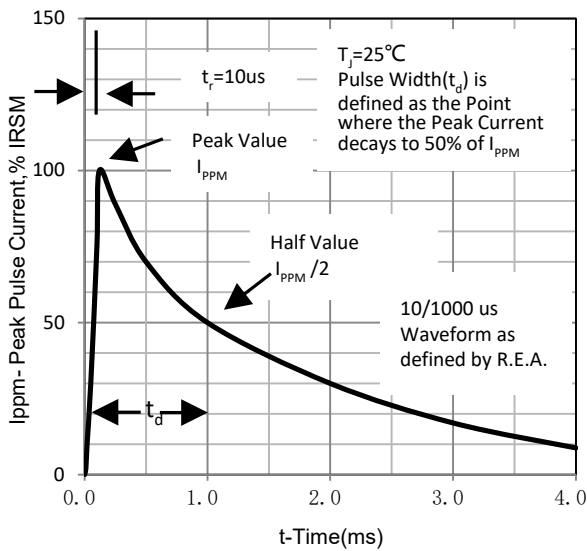


Fig.3 - Typical Forward Voltage Characteristics

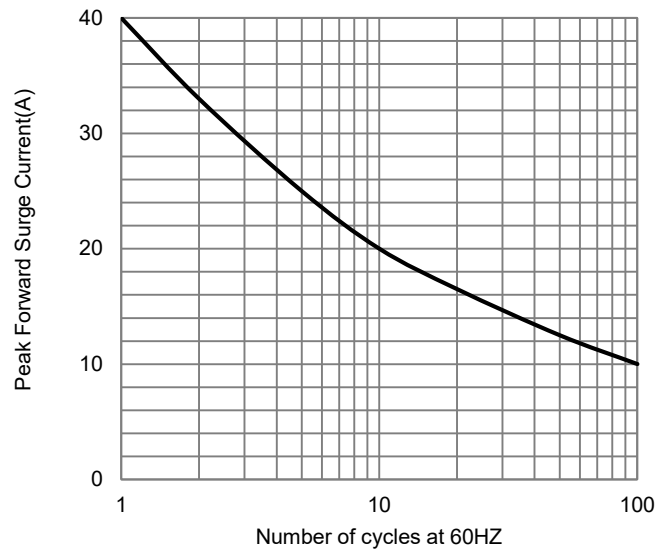
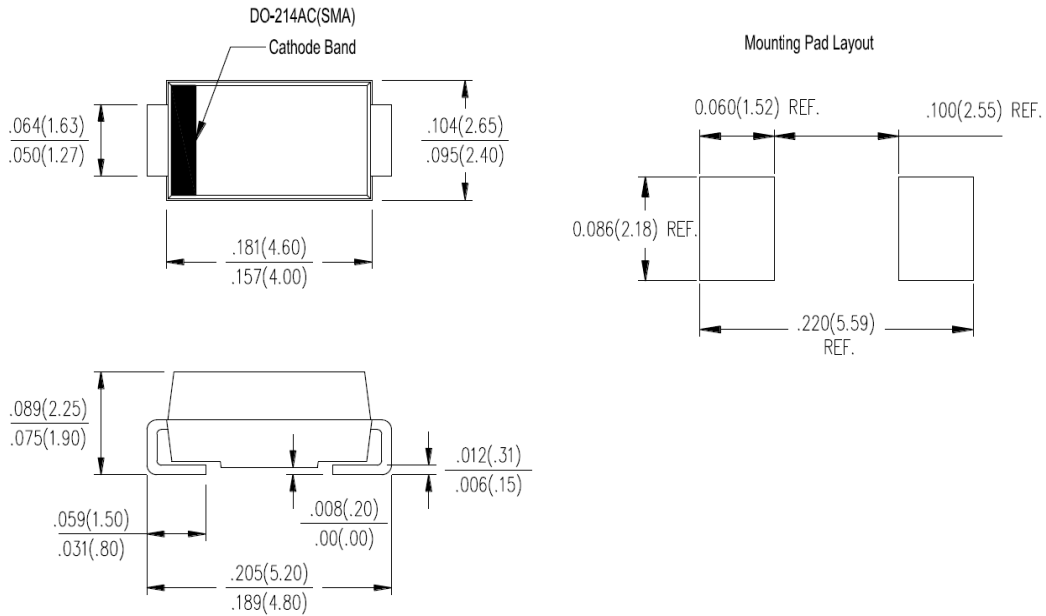


Fig.4 - Typical Reverse Current Characteristics

## Package Outline Dimensions

in inches (millimeters)

### SMA (DO-214AC)



## Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.15	Released Datasheet
Rev.B	2023.10.24	Modify document format



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