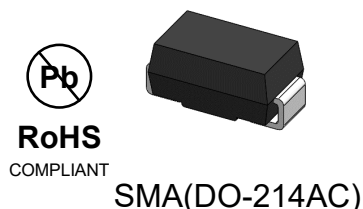


400W, 6.8 - 100V Transient Voltage Suppressors

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 μ s waveform
- AEC-Q101 qualified



Applications

- SMPS
- Adapters
- Monitor

Absolute Maximum Ratings (TA=25°C unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Peak power dissipation with a 10/1000us waveform	P _{PPM}	400	W
Peak pulse current with a 10/1000us waveform	I _{PPM}	See Next Table	A
Power dissipation, on infinite heat sink at T _L =75°C	P _D	3	W
Peak forward surge current, 8.3ms single half-sine wave	I _{FSM}	40	A
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

Thermal-Mechanical Specifications (TA=25°C unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{thJA}	90	°C /W
Thermal Resistance, Junction to Case	R _{thJC}	20	°C /W
Thermal Resistance, Junction to Lead	R _{thJL}	25	°C /W

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

Part Number (Uni)	Part Number (Bi)	Marking		Breakdown Voltage VBR (V)		Test Current I _T (mA)	Stand off Voltage V _{WM} (V)	Maximum reverse leakage at VWM I _D (μA)	Maximum Peak Pulse Current I _{ppM} (A)	Maximum Clamping Voltage at I _{PPM} V _c (V)
		UNI	BI							
				Min	Max					
AP4SMA6.8AS	AP4SMA6.8CAS	A6V8AS	A6V8CS	6.45	7.14	10.0	5.80	1000	38.1	10.5
AP4SMA7.5AS	AP4SMA7.5CAS	A7V5AS	A7V5CS	7.13	7.88	10.0	6.40	500	35.4	11.3
AP4SMA8.2AS	AP4SMA8.2CAS	A8V2AS	A8V2CS	7.79	8.61	10.0	7.02	200	33.1	12.1
AP4SMA9.1AS	AP4SMA9.1CAS	A9V1AS	A9V1CS	8.65	9.55	1.0	7.78	50	29.9	13.4
AP4SMA10AS	AP4SMA10CAS	A10AS	A10CS	9.5	10.5	1.0	8.55	10	27.6	14.5
AP4SMA11AS	AP4SMA11CAS	A11AS	A11CS	10.5	11.6	1.0	9.40	5.0	25.6	15.6
AP4SMA12AS	AP4SMA12CAS	A12AS	A12CS	11.4	12.6	1.0	10.2	1.0	24.0	16.7
AP4SMA13AS	AP4SMA13CAS	A13AS	A13CS	12.4	13.7	1.0	11.1	1.0	22.0	18.2
AP4SMA15AS	AP4SMA15CAS	A15AS	A15CS	14.3	15.8	1.0	12.8	1.0	18.9	21.2
AP4SMA16AS	AP4SMA16CAS	A16AS	A16CS	15.2	16.8	1.0	13.6	1.0	17.8	22.5
AP4SMA18AS	AP4SMA18CAS	A18AS	A18CS	17.1	18.9	1.0	15.3	1.0	15.9	25.2
AP4SMA20AS	AP4SMA20CAS	A20AS	A20CS	19.0	21.0	1.0	17.1	1.0	14.4	27.7
AP4SMA22AS	AP4SMA22CAS	A22AS	A22CS	20.9	23.1	1.0	18.8	1.0	13.1	30.6
AP4SMA24AS	AP4SMA24CAS	A24AS	A24CS	22.8	25.2	1.0	20.5	1.0	12.0	33.2
AP4SMA27AS	AP4SMA27CAS	A27AS	A27CS	25.7	28.4	1.0	23.1	1.0	10.7	37.5
AP4SMA30AS	AP4SMA30CAS	A30AS	A30CS	28.5	31.5	1.0	25.6	1.0	9.7	41.4
AP4SMA33AS	AP4SMA33CAS	A33AS	A33CS	31.4	34.7	1.0	28.2	1.0	8.8	45.7
AP4SMA36AS	AP4SMA36CAS	A36AS	A36CSS	34.2	37.8	1.0	30.8	1.0	8.0	49.9
AP4SMA39AS	AP4SMA39CAS	A39AS	A39CS	37.1	41.0	1.0	33.3	1.0	7.4	53.9
AP4SMA43AS	AP4SMA43CAS	A43AS	A43CS	40.9	45.2	1.0	36.8	1.0	6.7	59.3
AP4SMA47AS	AP4SMA47CAS	A47AS	A47CS	44.7	49.4	1.0	40.2	1.0	6.2	64.8
AP4SMA51AS	AP4SMA51CAS	A51AS	A51CS	48.5	53.6	1.0	43.6	1.0	5.7	70.1
AP4SMA56AS	AP4SMA56CAS	A56AS	A56CS	53.2	58.8	1.0	47.8	1.0	5.2	77.0
AP4SMA62AS	AP4SMA62CAS	A62AS	A62CS	58.9	65.1	1.0	53.0	1.0	4.7	85.0
AP4SMA68AS	AP4SMA68CAS	A68AS	A68CS	64.6	71.4	1.0	58.1	1.0	4.3	92.0
AP4SMA75AS	AP4SMA75CAS	A75AS	A75CS	71.3	78.8	1.0	64.1	1.0	3.9	103
AP4SMA82AS	AP4SMA82CAS	A82AS	A82CS	77.9	86.1	1.0	70.1	1.0	3.5	113
AP4SMA91AS	AP4SMA91CAS	A91AS	A91CS	86.5	95.5	1.0	77.8	1.0	3.2	125
AP4SMA100AS	AP4SMA100CAS	A100AS	A100CS	95	105	1.0	85.5	1.0	3.0	137

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)

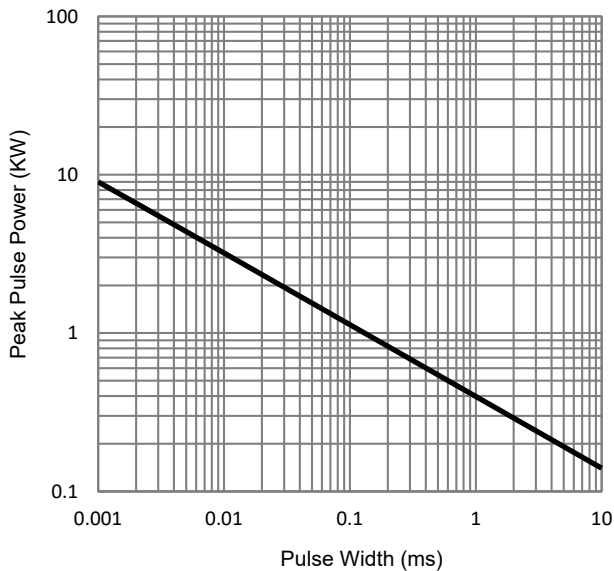


Fig.1 – Peak Pulse Power Derating Curve

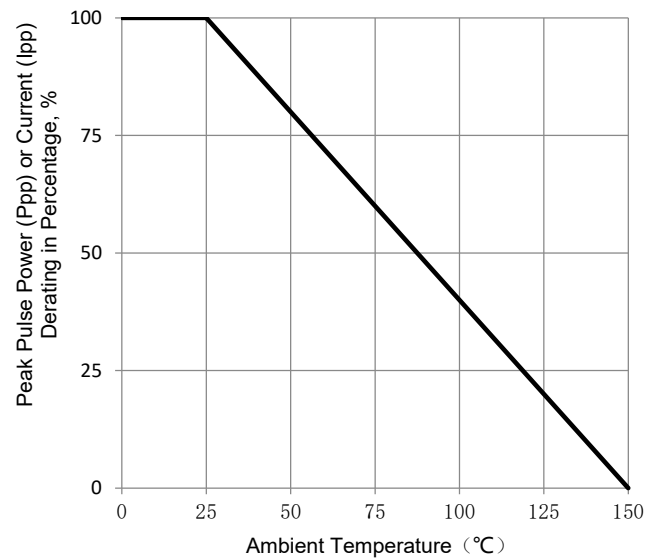


Fig.2 – Maximum Non-Repetitive Surge Current

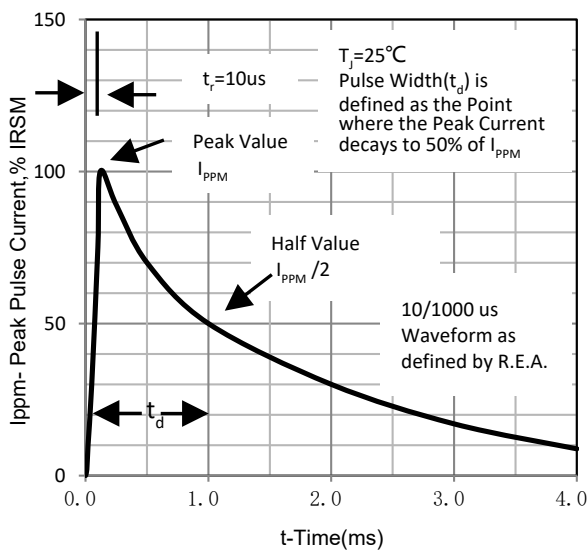


Fig.3 – Typical Forward Voltage Characteristics

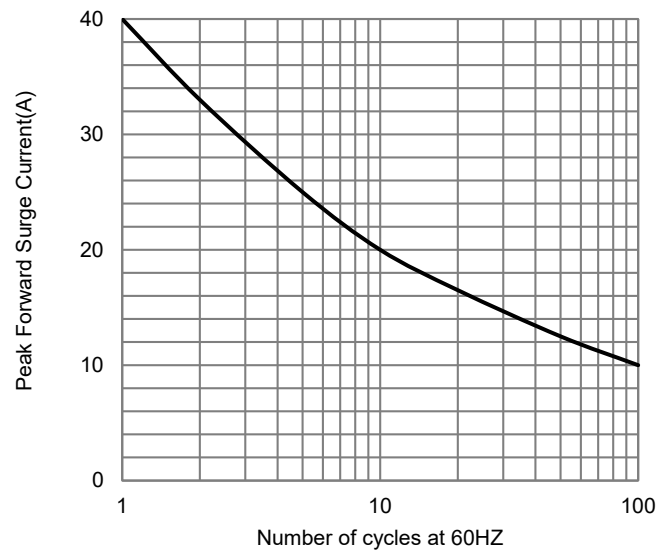
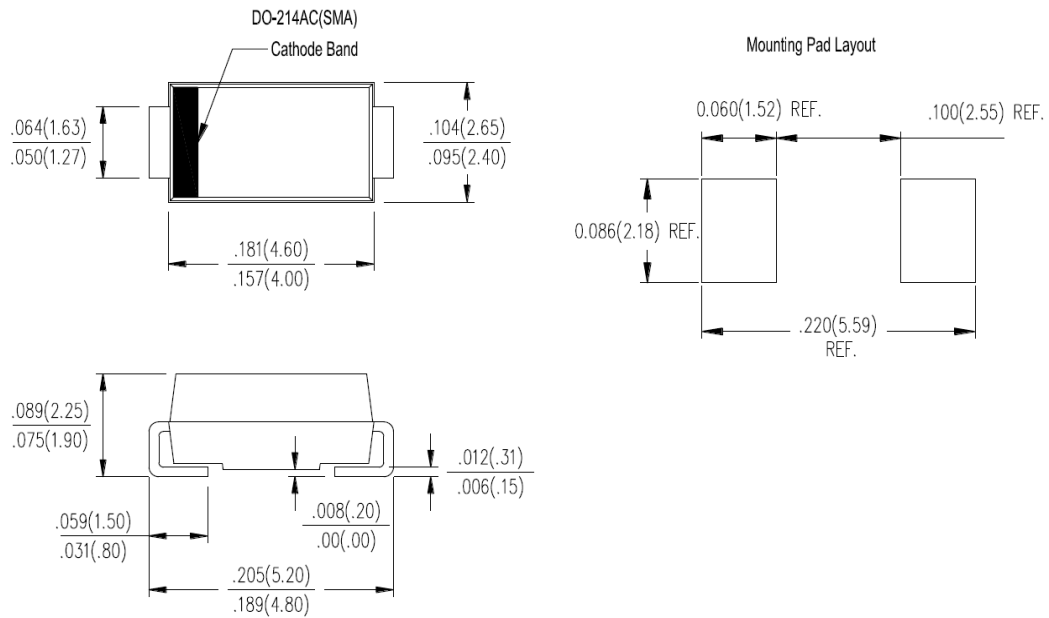


Fig.4 – Typical Reverse Current Characteristics

Package Outline Dimensions

in inches (millimeters)

SMA (DO-214AC)



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