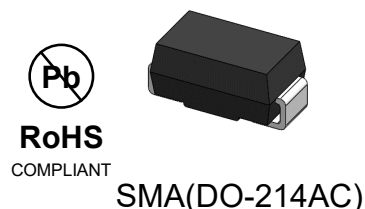


400W, 8.2 - 250V Transient Voltage Suppressors

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					
AP4SMA8.2A	AP4SMA8.2CA	A8V2A	A8V2C	7.79	8.61	10.0	7.02	200	33.1	12.1
AP4SMA9.1A	AP4SMA9.1CA	A9V1A	A9V1C	8.65	9.55	1.0	7.78	50	29.9	13.4
AP4SMA10A	AP4SMA10CA	A10A	A10C	9.5	10.5	1.0	8.55	10	27.6	14.5
AP4SMA11A	AP4SMA11CA	A11A	A11C	10.5	11.6	1.0	9.40	5.0	25.6	15.6
AP4SMA12A	AP4SMA12CA	A12A	A12C	11.4	12.6	1.0	10.2	1.0	24.0	16.7
AP4SMA13A	AP4SMA13CA	A13A	A13C	12.4	13.7	1.0	11.1	1.0	22.0	18.2
AP4SMA15A	AP4SMA15CA	A15A	A15C	14.3	15.8	1.0	12.8	1.0	18.9	21.2
AP4SMA16A	AP4SMA16CA	A16A	A16C	15.2	16.8	1.0	13.6	1.0	17.8	22.5
AP4SMA18A	AP4SMA18CA	A18A	A18C	17.1	18.9	1.0	15.3	1.0	15.9	25.2
AP4SMA20A	AP4SMA20CA	A20A	A20C	19.0	21.0	1.0	17.1	1.0	14.4	27.7
AP4SMA22A	AP4SMA22CA	A22A	A22C	20.9	23.1	1.0	18.8	1.0	13.1	30.6
AP4SMA24A	AP4SMA24CA	A24A	A24C	22.8	25.2	1.0	20.5	1.0	12.0	33.2
AP4SMA27A	AP4SMA27CA	A27A	A27C	25.7	28.4	1.0	23.1	1.0	10.7	37.5
AP4SMA30A	AP4SMA30CA	A30A	A30C	28.5	31.5	1.0	25.6	1.0	9.7	41.4
AP4SMA33A	AP4SMA33CA	A33A	A33C	31.4	34.7	1.0	28.2	1.0	8.8	45.7
AP4SMA36A	AP4SMA36CA	A36A	A36C	34.2	37.8	1.0	30.8	1.0	8.0	49.9
AP4SMA39A	AP4SMA39CA	A39A	A39C	37.1	41.0	1.0	33.3	1.0	7.4	53.9
AP4SMA43A	AP4SMA43CA	A43A	A43C	40.9	45.2	1.0	36.8	1.0	6.7	59.3
AP4SMA47A	AP4SMA47CA	A47A	A47C	44.7	49.4	1.0	40.2	1.0	6.2	64.8
AP4SMA51A	AP4SMA51CA	A51A	A51C	48.5	53.6	1.0	43.6	1.0	5.7	70.1
AP4SMA56A	AP4SMA56CA	A56A	A56C	53.2	58.8	1.0	47.8	1.0	5.2	77.0
AP4SMA62A	AP4SMA62CA	A62A	A62C	58.9	65.1	1.0	53.0	1.0	4.7	85.0
AP4SMA68A	AP4SMA68CA	A68A	A68C	64.6	71.4	1.0	58.1	1.0	4.3	92.0
AP4SMA75A	AP4SMA75CA	A75A	A75C	71.3	78.8	1.0	64.1	1.0	3.9	103
AP4SMA82A	AP4SMA82CA	A82A	A82C	77.9	86.1	1.0	70.1	1.0	3.5	113
AP4SMA91A	AP4SMA91CA	A91A	A91C	86.5	95.5	1.0	77.8	1.0	3.2	125
AP4SMA100A	AP4SMA100CA	A100A	A100C	95	105	1.0	85.5	1.0	3.0	137
AP4SMA110A	AP4SMA110CA	A110A	A110C	105	116	1.0	94.0	1.0	2.7	152
AP4SMA120A	AP4SMA120CA	A120A	A120C	114	126	1.0	102	1.0	2.5	165
AP4SMA130A	AP4SMA130CA	A130A	A130C	124	137	1.0	111	1.0	2.3	179
AP4SMA150A	AP4SMA150CA	A150A	A150C	143	158	1.0	128	1.0	2.0	207
AP4SMA160A	AP4SMA160CA	A160A	A160C	152	168	1.0	136	1.0	1.9	219
AP4SMA170A	AP4SMA170CA	A170A	A170C	162	179	1.0	145	1.0	1.8	234
AP4SMA180A	AP4SMA180CA	A180A	A180C	171	189	1.0	154	1.0	1.7	246

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 V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{ppM} (A)	Maximum Clamping Voltage at I _{ppM} V _C (V)
		UNI	BI							
				Min	Max					
AP4SMA200A	AP4SMA200CA	A200A	A200C	190	210	1.0	171	1.0	1.5	274
AP4SMA220A	AP4SMA220CA	A220A	A220C	209	231	1.0	185	1.0	1.3	328
AP4SMA250A	AP4SMA250CA	A250A	A250C	237	263	1.0	214	1.0	1.2	344

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°C unless otherwise noted)

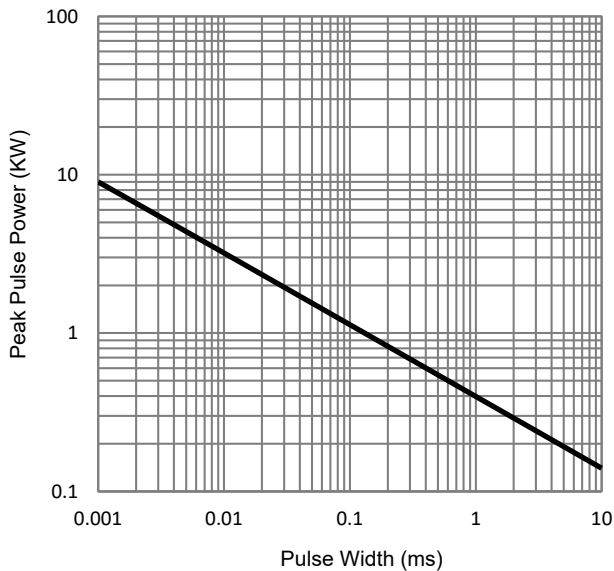


Fig.1 – Peak Pulse Power Derating Curve

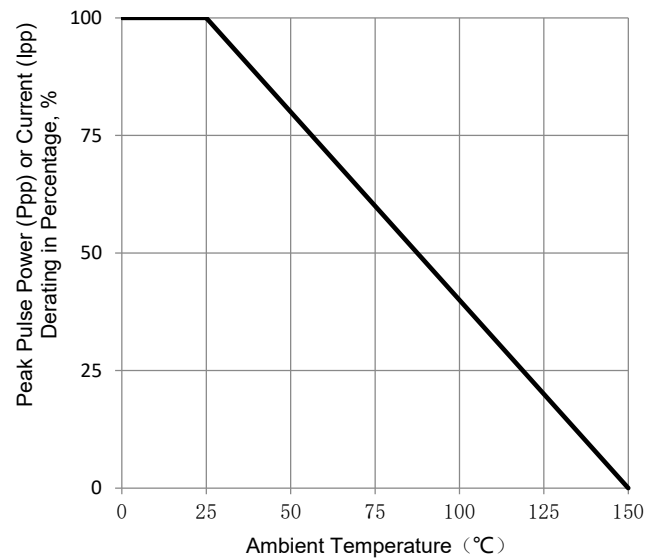


Fig.2 – Maximum Non-Repetitive Surge Current

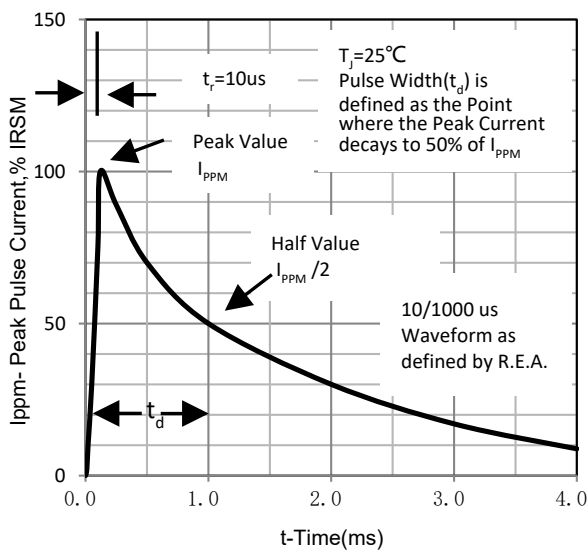


Fig.3 – Typical Forward Voltage Characteristics

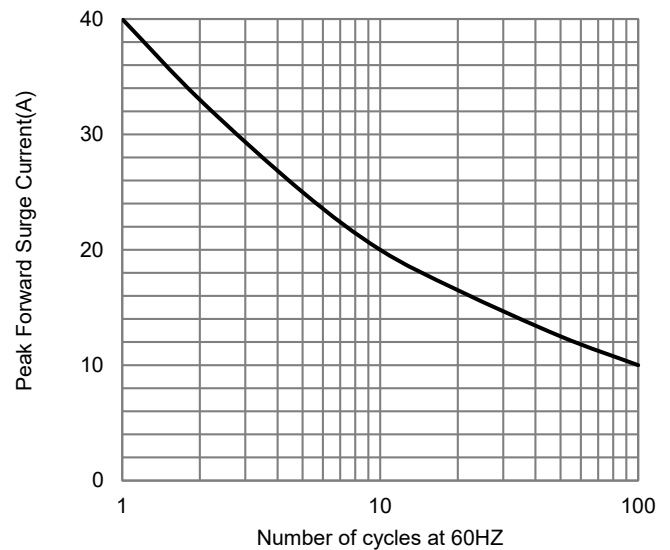
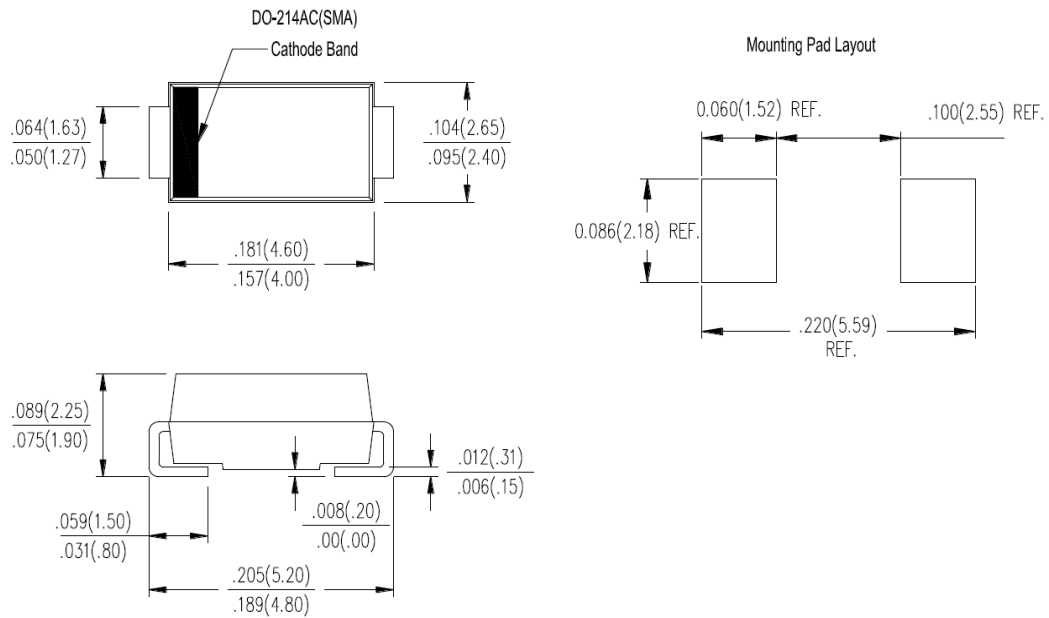


Fig.4 – Typical Reverse Current Characteristics

Package Outline Dimensions

in inches (millimeters)

SMA (DO-214AC)



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