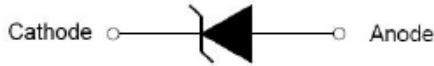


SMA



Features

- High forward surge capability
- Glass passivated junction
- Low Zener Impedance
- Power Dissipation of 1000mW
- High Stability and High Reliability
- Halogen free and RoHS compliant

Mechanical Data

- CASE: SMAJ(DO-214AC) Molded Plastic
- Polarity: Color band denotes cathode end
- Mounting position: ANY
- Weight: 0.0025 ounces, 0.071 gram

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SMA	Tape/Reel,7" reel	2000	EIA-481-1

Maximum Ratings & Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Rating	Symbol	Value	Unit
DC Power Dissipation at TL = 50 °C (Note1)	Pd	1	Watts
Maximum Forward Voltage at If = 200 mA	Vf	1.0	Volts
Junction Temperature Range	TJ	- 55 to + 150	°C
Storage Temperature Range	Ts	- 55 to + 150	°C

Note : (1) TL = Lead temperature at 5.0 mm² (0.013 mm thick) copper land areas.

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified).

TYPE	MARKING	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
		Vz @ IZT	IZT	ZzT @ IZT	ZzK @ IZK	IZK	IR @ VR		IZM
		(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1SMA1A3P0	3P0	3.0	80	20	400	1.0	100	1.0	340
1SMA1A3P3	3P3	3.3	80	20	400	1.0	50	1.0	320
1SMA1A3P6	3P6	3.6	70	20	500	1.0	50	1.0	290
1SMA1A3P9	3P9	3.9	60	15	500	1.0	50	1.0	280
1SMA1A4P3	4P3	4.3	50	13	500	1.0	50	1.0	250
1SMA1A4P7	4P7	4.7	45	13	500	1.0	50	1.0	215
1SMA1A5P1	5P1	5.1	45	10	500	1.0	50	1.5	200
1SMA1A5P6	5P6	5.6	45	7.0	400	1.0	50	2.0	190
1SMA1A6P2	6P2	6.2	35	4.0	300	1.0	50	3.0	170
1SMA1A6P8	6P8	6.8	35	3.5	300	1.0	50	4.0	155
1SMA1A7V5	7P5	7.5	35	3.0	200	0.5	50	4.5	140
1SMA1A8P2	8P2	8.2	25	5.0	200	0.5	50	6.2	130
1SMA1A9P1	9P1	9.1	25	5.0	200	0.5	50	6.8	120
1SMA1A10	10	10	25	7.0	200	0.5	50	7.5	105
1SMA1A11	11	11	20	8.0	300	0.5	50	8.2	97
1SMA1A12	12	12	20	9.0	350	0.5	0.5	9.1	88
1SMA1A13	13	13	20	10	400	0.5	0.5	10	79
1SMA1A15	15	15	15	15	500	0.5	0.5	11	71
1SMA1A16	16	16	15	15	500	0.5	0.5	12	66
1SMA1A18	18	18	15	20	500	0.5	0.5	13	62
1SMA1A20	20	20	10	24	600	0.5	0.5	15	56

TYPE	MARKING	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
		V _Z @ I _{ZT}	I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R @ V _R		I _{ZM}
		(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1SMA1A22	22	22	10	25	600	0.5	0.5	16	52
1SMA1A24	24	24	10	25	600	0.5	0.5	18	47
1SMA1A27	27	27	8.0	30	750	0.25	0.5	20	41
1SMA1A30	30	30	8.0	30	1000	0.25	0.5	22	36
1SMA1A33	33	33	8.0	35	1000	0.25	0.5	24	33
1SMA1A36	36	36	8.0	40	1000	0.25	0.5	27	30
1SMA1A39	39	39	6.0	50	1000	0.25	0.5	30	28
1SMA1A43	43	43	6.0	50	1000	0.25	0.5	33	26
1SMA1A47	47	47	4.0	90	1500	0.25	0.5	36	23
1SMA1A51	51	51	4.0	115	1500	0.25	0.5	39	21
1SMA1A56	56	56	4.0	120	2000	0.25	0.5	43	19
1SMA1A62	62	62	4.0	125	2000	0.25	0.5	47	16
1SMA1A68	68	68	4.0	130	2000	0.25	0.5	51	15
1SMA1A75	75	75	4.0	135	2000	0.25	0.5	56	14
1SMA1A82	82	82	2.7	200	3000	0.25	0.5	62	12
1SMA1A91	91	91	2.7	250	3000	0.25	0.5	68	10
1SMA1A100	100	100	2.7	350	3000	0.25	0.5	75	9.4
1SMA1A110	110	110	2.7	450	4000	0.25	0.5	82	8.6
1SMA1A120	120	120	2.0	550	4500	0.25	0.5	91	7.8
1SMA1A130	130	130	2.0	700	5000	0.25	0.5	100	7.0
1SMA1A150	150	150	2.0	1000	6000	0.25	0.5	110	6.4
1SMA1A160	160	160	1.5	1100	6500	0.25	0.5	120	5.8
1SMA1A180	180	180	1.5	1200	7000	0.25	0.5	130	5.2
1SMA1A200	200	200	1.5	1500	8000	0.25	0.5	150	4.7

Ratings and Characteristic Curves

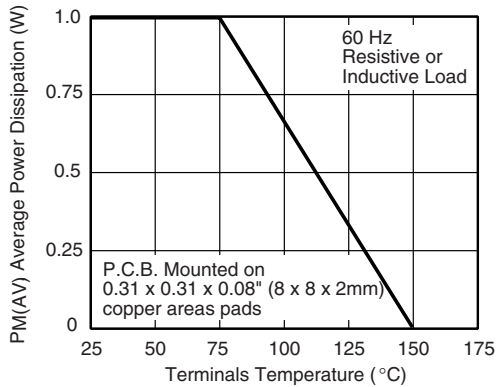


Fig. 1 - Maximum Continuous Power Dissipation

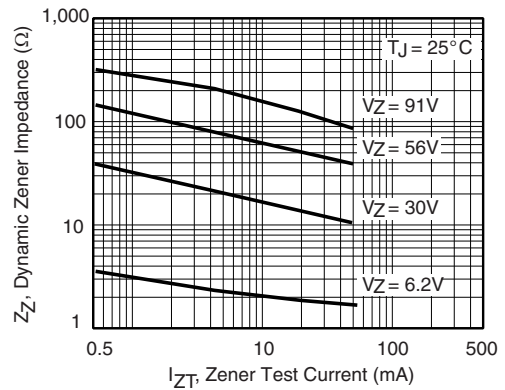


Fig. 2 - Typical Zener Impedance

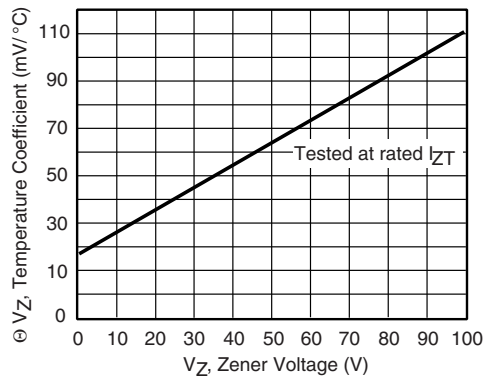


Fig. 3 - Typical Temperature Coefficients

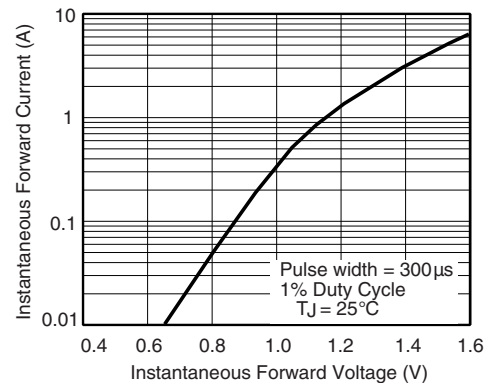


Fig. 4 - Typical Instantaneous Forward Characteristics for 1SMA1A91

Ratings and Characteristic Curves

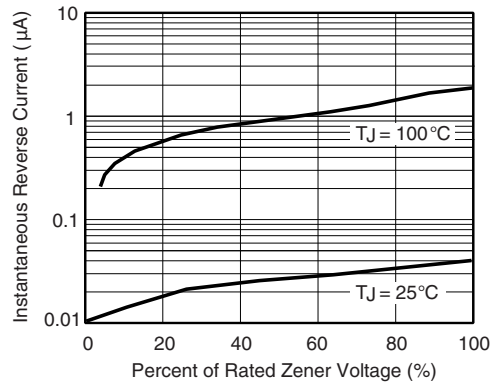


Fig. 5 - Typical Reverse Characteristics

Package Outline Dimensions: SMA(DO-214AC)

Dim	Millimeters		Inches	
	Min	Max	Min	Max
L	4.1	4.3	0.161	0.169
D	2.5	2.7	0.098	0.106
D1	1.3	1.5	0.051	0.059
T	4.8	5.2	0.189	0.205
T1	0.9	1.5	0.035	0.060
d	-	0.2	-	0.008
H	2.05	2.35	0.081	0.093
H1	2.0	2.2	0.079	0.087