SMA2Z SERIES

Description

SMA2Z Series Zener Diodes are excellent voltage stabilization devices.
The Series is designed specifically for Voltage stabilization、Voltage regulation, and so on.

Features

- For surface mounted applications
- Low Zenser impedance
- Low regulation factor
- Epoxy resin package
- RoHS Compliant

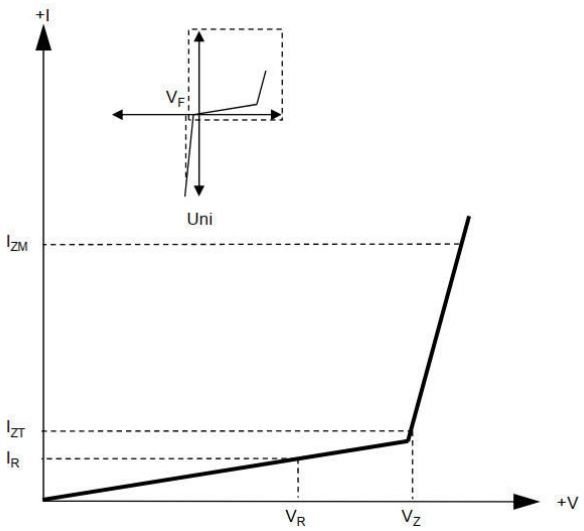
Mechanical Characteristics

- Package: SMA (DO-214AC) plastic package.
- Lead Finish: Matte Tin
- Case Material: Epoxy Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020

Applications

- Voltage stabilization
- Voltage regulation

Parameter	Definition
P_D	Power Dissipation
I_{ZM}	Maximum Zener Current
V_F	Maximum Forward Voltage
V_Z	Zener Voltage
I_R	Maximum Reverse Current
V_R	Maximum Reverse Voltage



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Absolute Maximum Ratings (TA=25℃ unless otherwise noted)

Parameter	Symbol	Value	Units	Remarks
Power Dissipation @T_L=75℃	P_D	2	W	
Maximum Forward Voltage @I_F=200mA	V_F	1.5	V	
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	30	℃/W	
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	220	℃/W	
Operating Temperature Range	T_J	-55 to 150	℃	
Storage Temperature Range	T_{STG}	-55 to 150	℃	

Electrical Characteristics (TA=25°C unless otherwise)

Part Number	Marking Code	Zener Voltage			Test Current	Maximum Zener Impedance			Maximum Reverse Current		Maximum Zener Current
		V_Z @ I_{ZT}			I_{ZT}	Z_{ZT} @I_{ZT}	Z_{ZK} @I_{ZK}		I_R @ V_R		I_{ZM}
		Nom (V)	Min (V)	Max (V)	mA	Ω	Ω	mA	μA	V	mA
SMA2Z3.3A	2Z3.3	3.3	3.14	3.47	145.0	8.0	400	1.00	100.0	1.0	548.0
SMA2Z3.6A	2Z3.6	3.6	3.42	3.78	139.0	5.0	400	1.00	100.0	1.0	502.0
SMA2Z3.9A	2Z3.9	3.9	3.71	4.10	128.0	5.0	400	1.00	50.0	1.0	464.0
SMA2Z4.3A	2Z4.3	4.3	4.09	4.52	116.0	4.5	400	1.00	50.0	1.0	421.0
SMA2Z4.7A	2Z4.7	4.7	4.47	4.94	106.0	4.5	550	1.00	10.0	1.0	385.0
SMA2Z5.1A	2Z5.1	5.1	4.85	5.36	98.0	3.5	600	1.00	10.0	1.0	354.0
SMA2Z5.6A	2Z5.6	5.6	5.32	5.88	89.5	2.5	500	1.00	10.0	2.0	323.0
SMA2Z6.2A	2Z6.2	6.2	5.89	6.51	80.5	1.5	700	1.00	10.0	3.0	292.0
SMA2Z6.8A	2Z6.8	6.8	6.46	7.14	73.5	2.0	700	1.00	10.0	4.0	266.0
SMA2Z7.5A	2Z7.5	7.5	7.13	7.88	66.5	2.0	700	0.50	10.0	5.0	242.0
SMA2Z8.2A	2Z8.2	8.2	7.79	8.61	61.0	2.3	700	0.50	10.0	6.0	220.0
SMA2Z9.1A	2Z9.1	9.1	8.65	9.56	55.0	2.5	700	0.50	10.0	7.0	200.0
SMA2Z10A	2Z10	10.0	9.50	10.50	50.0	3.5	700	0.25	10.0	7.6	182.0
SMA2Z11A	2Z11	11.0	10.45	11.55	45.5	4.0	700	0.25	1.0	8.4	166.0
SMA2Z12A	2Z12	12.0	11.40	12.60	41.5	4.5	700	0.25	1.0	9.1	152.0
SMA2Z13A	2Z13	13.0	12.35	13.65	38.5	5.0	700	0.25	0.5	9.9	138.0
SMA2Z14A	2Z14	14.0	13.30	14.70	35.7	5.5	700	0.25	0.5	10.6	130.0
SMA2Z15A	2Z15	15.0	14.25	15.75	33.4	7.0	700	0.25	0.5	11.4	122.0
SMA2Z16A	2Z16	16.0	15.20	16.80	31.2	8.0	700	0.25	0.5	12.2	114.0
SMA2Z17A	2Z17	17.0	16.15	17.85	29.4	9.0	750	0.25	0.5	13.0	107.0
SMA2Z18A	2Z18	18.0	17.10	18.90	27.8	10.0	750	0.25	0.5	13.7	100.0
SMA2Z19A	2Z19	19.0	18.05	19.95	26.3	11.0	750	0.25	0.5	14.4	95.0
SMA2Z20A	2Z20	20.0	19.00	21.00	25.0	11.0	750	0.25	0.5	15.2	90.0
SMA2Z22A	2Z22	22.0	20.90	23.10	22.8	12.0	750	0.25	0.5	16.7	82.0
SMA2Z24A	2Z24	24.0	22.80	25.20	20.8	13.0	750	0.25	0.5	18.2	76.0
SMA2Z27A	2Z27	27.0	25.65	28.35	18.5	18.0	750	0.25	0.5	20.6	68.0
SMA2Z30A	2Z30	30.0	28.50	31.50	16.6	20.0	1000	0.25	0.5	22.5	60.0
SMA2Z33A	2Z33	33.0	31.35	34.65	15.1	23.0	1000	0.25	0.5	25.1	55.0
SMA2Z36A	2Z36	36.0	34.20	37.80	13.9	25.0	1000	0.25	0.5	27.4	50.0
SMA2Z39A	2Z39	39.0	37.05	40.95	12.8	30.0	1000	0.25	0.5	29.7	47.0
SMA2Z43A	2Z43	43.0	40.85	45.15	11.6	35.0	1500	0.25	0.5	32.7	43.0
SMA2Z47A	2Z47	47.0	44.65	49.35	10.6	40.0	1500	0.25	0.5	35.8	39.0

The accuracy of voltage regulator is 5%

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Electrical Characteristics (TA=25°C unless otherwise)

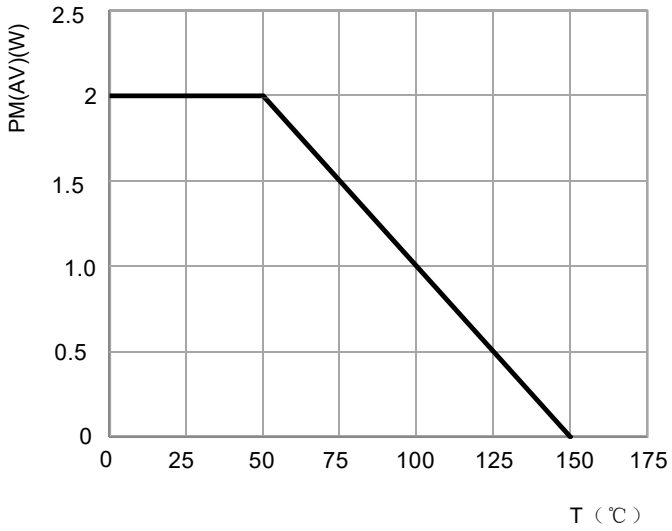
Part Number	Marking Code	Zener Voltage			Test Current	Maximum Zener Impedance			Maximum Reverse Current		Maximum Zener Current
		V_Z @ I_{ZT}			I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}		I_R @ V_R		I_{ZM}
		Nom (V)	Min (V)	Max (V)	mA	Ω	Ω	mA	μA	V	mA
SMA2Z51A	2Z51	51.0	48.45	53.55	9.8	48.0	1500	0.25	0.5	38.8	36.0
SMA2Z56A	2Z56	56.0	53.20	58.80	9.0	55.0	2000	0.25	0.5	42.6	32.0
SMA2Z62A	2Z62	62.0	58.90	65.10	8.1	60.0	2000	0.25	0.5	47.1	29.0
SMA2Z68A	2Z68	68.0	64.60	71.40	7.4	75.0	2000	0.25	0.5	51.7	27.0
SMA2Z75A	2Z75	75.0	71.25	78.75	6.7	90.0	2000	0.25	0.5	56.0	24.0
SMA2Z82A	2Z82	82.0	77.90	86.10	6.1	100.0	3000	0.25	0.5	62.2	22.0
SMA2Z91A	2Z91	91.0	86.45	95.55	5.5	125.0	3000	0.25	0.5	69.2	20.0
SMA2Z100A	2Z100	100.0	95.00	105.00	5.0	175.0	3000	0.25	0.5	76.0	18.0
SMA2Z110A	2Z110	110.0	104.50	115.50	4.5	250.0	4000	0.25	0.5	83.6	17.0
SMA2Z120A	2Z120	120.0	114.00	126.00	4.2	325.0	4500	0.25	0.5	91.2	15.0
SMA2Z130A	2Z130	130.0	123.50	136.50	3.8	400.0	5000	0.25	0.5	98.8	14.0
SMA2Z140A	2Z140	140.0	133.00	147.00	3.6	500.0	5500	0.25	0.5	106.4	13.0
SMA2Z150A	2Z150	150.0	142.50	157.50	3.3	575.0	6000	0.25	0.5	114.0	12.0
SMA2Z160A	2Z160	160.0	152.00	168.00	3.1	650.0	6500	0.25	0.5	121.6	11.0
SMA2Z170A	2Z170	170.0	161.50	178.50	2.9	675.0	7000	0.25	0.5	130.4	11.0
SMA2Z180A	2Z180	180.0	171.00	189.00	2.8	725.0	7000	0.25	0.5	136.8	10.0
SMA2Z190A	2Z190	190.0	180.50	199.50	2.6	825.0	8000	0.25	0.5	144.8	10.0
SMA2Z200A	2Z200	200.0	190.00	210.00	2.5	1900.0	9990	0.25	0.5	152.0	9.0
SMA2Z220A	2Z220	220.0	209.00	231.00	2.0	2000.0	8500	0.25	0.5	167.0	8.0

The accuracy of voltage regulator is 5%

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Rating And Characteristic Curves (TA=25°C unless otherwise noted)

FIG1: Maximum Continuous Power Dissipation

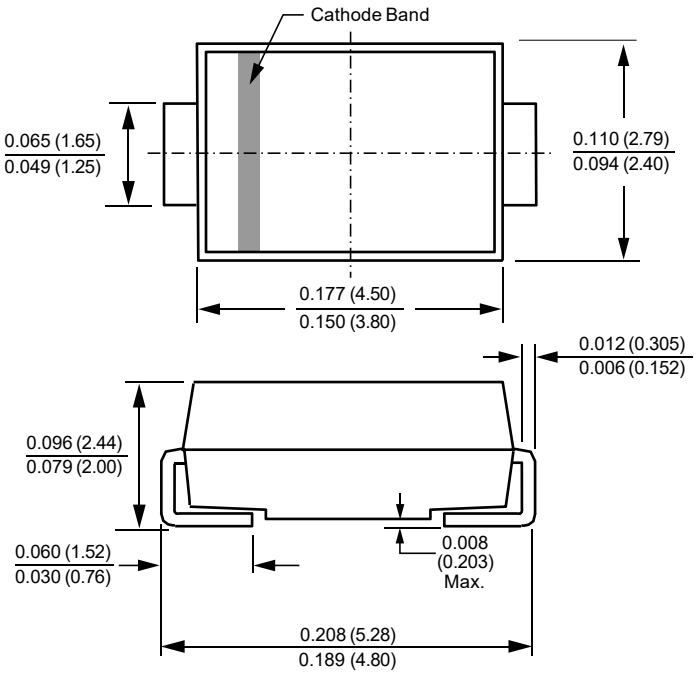


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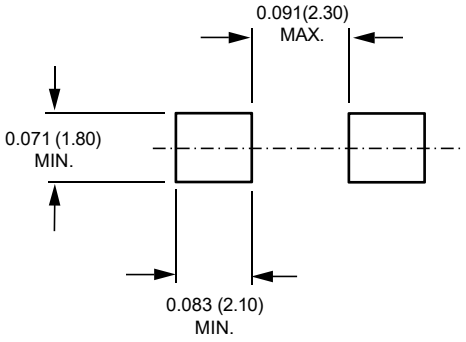
Package Outline Dimensions in inches (millimeters)

CASE:0101

SMA (DO-214AC)



Mounting Pad Layout



Part Marking System



PDW:Company Logo

XX:Marking Code

Summary of Packing Options

Package	Packing Description	Packing Quantity
SMA	Tape/Reel,7" reel	2000
	Tape/Reel,13" reel	5000
		7500

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