

Features

- For surface mounted applications in order to optimize board space
- Low profile space
- Glass passivated chip
- High reliability
- Typical I_R less than $1\mu A$ at V_R
- For use in stabilizing and clipping circuits with high power rating
- Component in accordance to RoHS 2002/95/1 and WEEE 2002/96/EC



SMB (DO – 214AA)

Mechanical Data

- **Case:** JEDEC DO-214AA molded plastic body over glass passivated chip
- **Terminals:** Solder plated, solderable per MIL-STD-750 Method 2026
- **Polarity:** types the band by laser denotes the cathode

Applications

- Voltage stabilization

Maximum Ratings & Thermal Characteristics

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

Items	Symbol	Value	UNIT
Power dissipation	P	3	W
Typical thermal resistance, junction to ambient ⁽¹⁾	$R_{\theta JA}$	100	$^\circ C / W$
Typical thermal resistance, junction to lead ⁽¹⁾	$R_{\theta JL}$	22	$^\circ C / W$
Junction temperature	T_J	150	$^\circ C$
Storage temperature range	T_{STG}	-55 to +150	$^\circ C$

Note 1: Mounted on P.C.B. with 0.28 x 0.28" (7.0 x 7.0mm) copper pad areas.

Electrical Characteristics

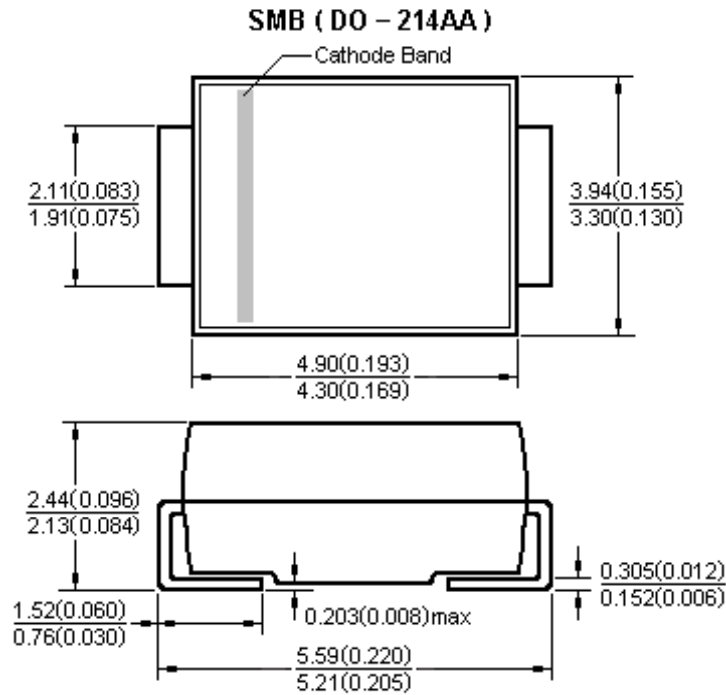
T_A = 25°C unless otherwise noted, V_F = 1.2V Max. @ I_F = 200mA for all types.

DEVICE House No. ⁽²⁾	Zener Voltage				Zener Impedance			Leakage Current		I _{ZM}
	V _Z (Volts)			@I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}		I _R @V _R		
	Min	Nom	Max	mA	Ω	Ω	mA	μA	Volts	
3BZ5.6	5.32	5.6	5.88	66.9	5.0	700	1	200	3.0	267
3BZ6.2	5.89	6.2	6.51	60.5	2.0	700	1	200	4.0	241
3BZ6.8	6.46	6.8	7.14	55.1	2.5	400	1	200	5.2	220
3BZ8.2	7.79	8.2	8.61	45.7	5.0	700	0.5	10	6.5	183
3BZ9.1	8.64	9.1	9.56	41.2	5.0	700	0.5	10	7.0	164
3BZ10	9.50	10	10.5	37.5	5.0	700	0.25	10	8.0	150
3BZ11	10.5	11	11.6	34.1	5.5	550	0.25	5	8.4	136
3BZ12	11.4	12	12.6	31.2	6.5	550	0.25	1	9.1	125
3BZ13	12.4	13	13.7	28.8	7.0	550	0.25	1	9.9	115
3BZ15	14.3	15	15.8	25.0	9.0	600	0.25	1	11.4	100
3BZ16	15.2	16	16.8	23.4	10.0	600	0.25	1	12.2	94
3BZ18	17.1	18	18.9	20.8	12.0	650	0.25	1	13.7	83
3BZ20	19.0	20	21.0	18.7	14.0	650	0.25	1	15.2	75
3BZ22	20.9	22	23.1	17.0	17.5	650	0.25	1	16.7	68
3BZ24	22.8	24	25.2	15.6	19	700	0.25	1	18.2	62
3BZ27	25.7	27	28.4	13.9	23	700	0.25	1	20.6	55
3BZ30	28.5	30	31.5	12.5	28	750	0.25	1	22.8	50
3BZ33	31.4	33	34.7	11.4	33	800	0.25	1	25.1	45
3BZ36	34.2	36	37.8	10.4	38	850	0.25	1	27.4	41
3BZ39	37.1	39	41.0	9.6	45	900	0.25	1	29.7	38
3BZ43	40.9	43	45.2	8.7	53	950	0.25	1	32.7	34
3BZ47	44.6	47	49.4	8.0	67	1000	0.25	1	35.8	31
3BZ51	48.4	51	53.6	7.3	70	1100	0.25	1	38.8	29
3BZ56	53.2	56	58.8	6.7	86	1300	0.25	1	42.6	27
3BZ62	58.9	62	65.1	6.0	100	1500	0.25	1	47.1	24
3BZ68	64.6	68	71.4	5.5	120	1700	0.25	1	51.7	22

Note 2: TOLERANCE AND TYPE NUMBER DESIGNATION

The type numbers listed indicate a tolerance of ±5%. Other Zener voltages and tolerances are available upon request.

Package Outline



Dimensions in millimeters and (inches)

Notice

- Product is intended for use in general electronics applications.
- Product should be worked less than the ratings; if exceeded, may cause permanent damage or introduce latent failure mechanisms.
- The absolute maximum ratings are rated values and must not be exceeded during operation. The following are the general derating methods you design a circuit with a device.
 - $I_{F(AV)}$: We recommend that the worst case current be no greater than 80%.
 - I_{FSM} : This rating specifies the non-repetitive peak current. This is only applied for an abnormal operation, which the general during the lifespan of the device.
 - T_J : Derate this rating when using a device in order to ensure high reliability. We recommend that the device be used at a T_J of below 125°C.

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