

CMZ5913BP THRU CMZ5956BP

SURFACE MOUNT SILICON
ZENER DIODES
2.5 WATT, 3.3 THRU 200 VOLT
±5% TOLERANCE



SMB CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMZ5913BP series 2.5 Watt surface mount silicon Zener diodes are highly reliable components designed for use in all types of commercial, industrial, entertainment, computer, and automotive applications. To order devices on 12mm Tape and Reel (3000/13" Reel), add TR13 suffix to part number.

MARKING: SEE MARKING CODE ON ELECTRICAL CHARACTERISTIC TABLE

• Device is **Halogen Free** by design

- FEATURES:**
- Low cost
 - High reliability
 - Superior lot to lot consistency
 - "C" bend construction provides strain relief when mounted on pc board

MAXIMUM RATINGS: (T_A=25°C)

Power Dissipation (T_L=75°C)
Power Dissipation (Note 1)
Operating and Storage Junction Temperature
Thermal Resistance
Thermal Resistance (Note 1)

SYMBOL

SYMBOL		UNITS
P _D	2.5	W
P _D	1.0	W
T _J , T _{stg}	-65 to +150	°C
θ _{JL}	30	°C/W
θ _{JA}	125	°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C) V_F=1.5V MAX @ I_F=200mA (for all types)

TYPE	ZENER VOLTAGE V _Z @ I _{ZT}			TEST CURRENT I _{ZT} mA	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM ZENER CURRENT (T _L =75°C) I _{ZM} mA	MARKING CODE
	MIN V	NOM V	MAX V		Z _{ZT} @ I _{ZT} Ω	Z _{ZK} @ I _{ZK} Ω	I _R @ V _R μA	V _R V			
CMZ5913BP	3.135	3.3	3.465	113.6	10	500	1.0	100	1.0	454	C5913BP
CMZ5914BP	3.420	3.6	3.780	104.2	9.0	500	1.0	75	1.0	416	C5914BP
CMZ5915BP	3.705	3.9	4.095	96.1	7.5	500	1.0	25	1.0	384	C5915BP
CMZ5916BP	4.085	4.3	4.515	87.2	6.0	500	1.0	5.0	1.0	348	C5916BP
CMZ5917BP	4.465	4.7	4.935	79.8	5.0	500	1.0	5.0	1.5	319	C5917BP
CMZ5918BP	4.845	5.1	5.355	73.5	4.0	350	1.0	5.0	2.0	294	C5918BP
CMZ5919BP	5.320	5.6	5.880	66.9	2.0	250	1.0	5.0	3.0	267	C5919BP
CMZ5920BP	5.890	6.2	6.510	60.5	2.0	200	1.0	5.0	4.0	241	C5920BP
CMZ5921BP	6.460	6.8	7.140	55.1	2.5	200	1.0	5.0	5.2	221	C5921BP
CMZ5922BP	7.125	7.5	7.875	50.0	3.0	400	0.5	5.0	6.0	200	C5922BP
CMZ5923BP	7.790	8.2	8.610	45.7	3.5	400	0.5	5.0	6.5	183	C5923BP
CMZ5924BP	8.645	9.1	9.555	41.2	4.0	500	0.5	5.0	7.0	165	C5924BP
CMZ5925BP	9.500	10	10.50	37.5	4.5	500	0.25	5.0	8.0	150	C5925BP
CMZ5926BP	10.45	11	11.55	34.1	5.5	550	0.25	1.0	8.4	136	C5926BP
CMZ5927BP	11.40	12	12.60	31.2	6.5	550	0.25	1.0	9.1	125	C5927BP
CMZ5928BP	12.35	13	13.65	28.8	7.0	550	0.25	1.0	9.9	115	C5928BP
CMZ5929BP	14.25	15	15.75	25.0	9.0	600	0.25	1.0	11.4	100	C5929BP

Notes: (1) Mounted on 2 inch square FR-4 PCB with minimum recommended SMB copper pad area.

R2 (4-April 2013)

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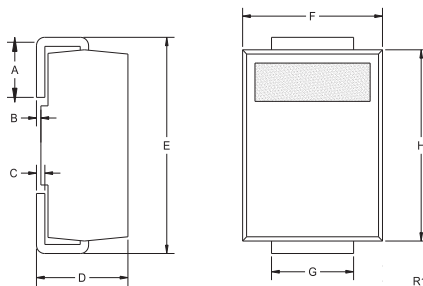
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$) $V_F=1.5\text{V MAX @ } I_F=200\text{mA}$ (for all types)

TYPE	ZENER VOLTAGE $V_Z @ I_{ZT}$			TEST CURRENT I_{ZT}	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM ZENER CURRENT ($T_L=75^\circ\text{C}$) I_{ZM}	MARKING CODE
	MIN	NOM	MAX		$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R @ V_R$				
	V	V	V		Ω	Ω	μA	V			
CMZ5930BP	15.20	16	16.80	23.4	10	600	0.25	1.0	12.2	94	C5930BP
CMZ5931BP	17.10	18	18.90	20.8	12	650	0.25	1.0	13.7	83	C5931BP
CMZ5932BP	19.00	20	21.00	18.7	14	650	0.25	1.0	15.2	75	C5932BP
CMZ5933BP	20.90	22	23.10	17.0	17.5	650	0.25	1.0	16.7	68	C5933BP
CMZ5934BP	22.80	24	25.20	15.6	19	700	0.25	1.0	18.2	63	C5934BP
CMZ5935BP	25.65	27	28.35	13.9	23	700	0.25	1.0	20.6	56	C5935BP
CMZ5936BP	28.50	30	31.50	12.5	26	750	0.25	1.0	22.8	50	C5936BP
CMZ5937BP	31.35	33	34.65	11.4	33	800	0.25	1.0	25.1	45	C5937BP
CMZ5938BP	34.20	36	37.80	10.4	38	850	0.25	1.0	27.4	42	C5938BP
CMZ5939BP	37.05	39	40.95	9.6	45	900	0.25	1.0	29.7	38	C5939BP
CMZ5940BP	40.85	43	45.15	8.7	53	950	0.25	1.0	32.7	35	C5940BP
CMZ5941BP	44.65	47	49.35	8.0	67	1000	0.25	1.0	35.8	32	C5941BP
CMZ5942BP	48.45	51	53.55	7.3	70	1100	0.25	1.0	38.8	29	C5942BP
CMZ5943BP	53.20	56	58.80	6.7	86	1300	0.25	1.0	42.6	27	C5943BP
CMZ5944BP	58.90	62	65.10	6.0	100	1500	0.25	1.0	47.1	24	C5944BP
CMZ5945BP	64.60	68	71.40	5.5	120	1700	0.25	1.0	51.7	22	C5945BP
CMZ5946BP	71.25	75	78.75	5.0	140	2000	0.25	1.0	56.0	20	C5946BP
CMZ5947BP	77.90	82	86.10	4.6	160	2500	0.25	1.0	62.2	18	C5947BP
CMZ5948BP	86.45	91	95.55	4.1	200	3000	0.25	1.0	69.2	16	C5948BP
CMZ5949BP	95.00	100	105.0	3.7	250	3100	0.25	1.0	76.0	15	C5949BP
CMZ5950BP	104.5	110	115.5	3.4	300	4000	0.25	1.0	83.6	13	C5950BP
CMZ5951BP	114.0	120	126.0	3.1	360	4500	0.25	1.0	91.2	12	C5951BP
CMZ5952BP	123.5	130	136.5	2.9	450	5000	0.25	1.0	98.8	11	C5952BP
CMZ5953BP	142.5	150	157.5	2.5	600	6000	0.25	1.0	114.0	10	C5953BP
CMZ5954BP	152.0	160	168.0	2.3	700	6500	0.25	1.0	121.6	9.0	C5954BP
CMZ5955BP	171.0	180	189.0	2.1	900	7000	0.25	1.0	136.8	8.0	C5955BP
CMZ5956BP	190.0	200	210.0	1.9	1200	8000	0.25	1.0	152.0	7.0	C5956BP

SMB CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.030	0.060	0.76	1.52
B	0.004	0.008	0.10	0.20
C	0.006	0.012	0.15	0.30
D	0.086	0.096	2.18	2.44
E	0.200	0.220	5.08	5.59
F	0.130	0.150	3.30	3.81
G	0.077	0.083	1.96	2.11
H	0.160	0.180	4.06	4.57

SMB (REV: R1)

R2 (4-April 2013)