

CMZ5919BPQ THRU CMZ5945BPQ

**SURFACE MOUNT SILICON
AUTOMOTIVE ZENER DIODES
3.0 WATT, 5.6 THRU 68 VOLT
±5% TOLERANCE**

**SMB CASE**www.centrasemi.com**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMZ5913BPQ series surface mount silicon Zener diodes are highly reliable components designed for use in all types of commercial, industrial, entertainment, computer, and automotive applications. Manufactured and qualified to AEC-Q101.

**MARKING: SEE MARKING CODE ON
ELECTRICAL CHARACTERISTIC TABLE****FEATURES:**

- High reliability
- “C” bend construction provides strain relief when mounted on pc board

MAXIMUM RATINGS: ($T_A=25^{\circ}\text{C}$)Power Dissipation ($T_L=75^{\circ}\text{C}$)

Power Dissipation (Note 1)

Operating and Storage Junction Temperature

Thermal Resistance

Thermal Resistance (Note 1)

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

SYMBOL P_D

3.0

 P_D

1.0

 T_J, T_{stg}

-65 to +150

 θ_{JL}

25

 θ_{JA}

125

UNITS

W

W

 $^{\circ}\text{C}$ $^{\circ}\text{C}/\text{W}$ $^{\circ}\text{C}/\text{W}$ **ELECTRICAL CHARACTERISTICS:** ($T_A=25^{\circ}\text{C}$) $V_F=1.5\text{V MAX @ } I_F=200\text{mA}$ (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	V	mA	
CMZ5919BPQ	5.320	5.6	5.880	66.9	2.0	250	1.0	5.0	3.0	267	C5919BP
CMZ5920BPQ	5.890	6.2	6.510	60.5	2.0	200	1.0	5.0	4.0	241	C5920BP
CMZ5921BPQ	6.460	6.8	7.140	55.1	2.5	200	1.0	5.0	5.2	221	C5921BP
CMZ5922BPQ	7.125	7.5	7.875	50.0	3.0	400	0.5	5.0	6.0	200	C5922BP
CMZ5923BPQ	7.790	8.2	8.610	45.7	3.5	400	0.5	5.0	6.5	183	C5923BP
CMZ5924BPQ	8.645	9.1	9.555	41.2	4.0	500	0.5	5.0	7.0	165	C5924BP
CMZ5925BPQ	9.500	10	10.50	37.5	4.5	500	0.25	5.0	8.0	150	C5925BP
CMZ5926BPQ	10.45	11	11.55	34.1	5.5	550	0.25	1.0	8.4	136	C5926BP
CMZ5927BPQ	11.40	12	12.60	31.2	6.5	550	0.25	1.0	9.1	125	C5927BP
CMZ5928BPQ	12.35	13	13.65	28.8	7.0	550	0.25	1.0	9.9	115	C5928BP
CMZ5929BPQ	14.25	15	15.75	25.0	9.0	600	0.25	1.0	11.4	100	C5929BP
CMZ5930BPQ	15.20	16	16.80	23.4	10	600	0.25	1.0	12.2	94	C5930BP
CMZ5931BPQ	17.10	18	18.90	20.8	12	650	0.25	1.0	13.7	83	C5931BP
CMZ5932BPQ	19.00	20	21.00	18.7	14	650	0.25	1.0	15.2	75	C5932BP
CMZ5933BPQ	20.90	22	23.10	17.0	17.5	650	0.25	1.0	16.7	68	C5933BP
CMZ5934BPQ	22.80	24	25.20	15.6	19	700	0.25	1.0	18.2	63	C5934BP
CMZ5935BPQ	25.65	27	28.35	13.9	23	700	0.25	1.0	20.6	56	C5935BP

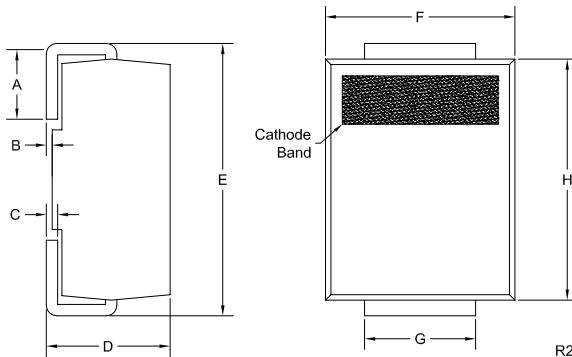
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$) $V_F=1.5\text{V MAX @ } I_F=200\text{mA}$ (for all types)

TYPE	ZENER VOLTAGE V _Z @ I _{ZT}			TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM ZENER CURRENT (T _L =75°C)	MARKING CODE
	MIN	NOM	MAX	I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _R @ V _R		I _{ZM}		
	V	V	V	mA	Ω	Ω	mA	μA	V	mA	
CMZ5936BPQ	28.50	30	31.50	12.5	26	750	0.25	1.0	22.8	50	C5936BP
CMZ5937BPQ	31.35	33	34.65	11.4	33	800	0.25	1.0	25.1	45	C5937BP
CMZ5938BPQ	34.20	36	37.80	10.4	38	850	0.25	1.0	27.4	42	C5938BP
CMZ5939BPQ	37.05	39	40.95	9.6	45	900	0.25	1.0	29.7	38	C5939BP
CMZ5940BPQ	40.85	43	45.15	8.7	53	950	0.25	1.0	32.7	35	C5940BP
CMZ5941BPQ	44.65	47	49.35	8.0	67	1000	0.25	1.0	35.8	32	C5941BP
CMZ5942BPQ	48.45	51	53.55	7.3	70	1100	0.25	1.0	38.8	29	C5942BP
CMZ5943BPQ	53.20	56	58.80	6.7	86	1300	0.25	1.0	42.6	27	C5943BP
CMZ5944BPQ	58.90	62	65.10	6.0	100	1500	0.25	1.0	47.1	24	C5944BP
CMZ5945BPQ	64.60	68	71.40	5.5	120	1700	0.25	1.0	51.7	22	C5945BP

SMB CASE - MECHANICAL OUTLINE

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.030	0.060	0.76	1.52
B	0.000	0.008	0.00	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	0.191	4.06	4.85

SMB (REV: R2)

R1 (11-March 2025)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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