CMZ5919BQ THRU CMZ5945BQ

SURFACE MOUNT SILICON AUTOMOTIVE ZENER DIODES 1.5 WATT, 5.6 THRU 68 VOLT ± 5% TOLERANCE

SMA CASE

Central Semiconductor

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMZ5919BQ series 1.5 Watt surface mount silicon Zener diodes are highly reliable components designed for use in all types of commercial, industrial, entertainment, computer, and automotive applications. Manufactured and qualified to AEC-Q101. The SMA case occupies 30% less board space than the SMB case.

MARKING: SEE MARKING CODE ON ELECTRICAL CHARACTERISTIC TABLE

FEATURES:

- Super miniature case
- 200 Watts of TVS power
- ± 5% Tolerance
- High reliability
- "C" bend construction provides strain relief when mounted on pc board

MAXIMUM RATINGS: (T_A=25°C unless otherwise noted)	**SYMBOL**		**UNITS**
Peak Forward Surge Current, tp=8.3ms	I_{FSM}	10	A
Power Dissipation (T_L=75°C)	P_D	1.5	W
Power Dissipation (Note 1)	P_D	0.5	W
Peak Power Dissipation, tp=10x1000μs (T_L<25°C)	P_{PK}	200	W
Peak Power Dissipation, tp=8x20μs (T_L<25°C)	P_{PK}	1000	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JL}	50	°C/W
Thermal Resistance (Note 1)	Θ_{JA}	250	°C/W

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

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	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	
CMZ5919BQ	5.320	5.6	5.880	66.9	2.0	250	1.0	5.0	3.0	267	C5919B
CMZ5920BQ	5.890	6.2	6.510	60.5	2.0	200	1.0	5.0	4.0	241	C5920B
CMZ5921BQ	6.460	6.8	7.140	55.1	2.5	200	1.0	5.0	5.2	221	C5921B
CMZ5922BQ	7.125	7.5	7.875	50.0	3.0	400	0.5	5.0	6.0	200	C5922B
CMZ5923BQ	7.790	8.2	8.610	45.7	3.5	400	0.5	5.0	6.5	183	C5923B
CMZ5924BQ	8.645	9.1	9.555	41.2	4.0	500	0.5	5.0	7.0	165	C5924B
CMZ5925BQ	9.500	10	10.50	37.5	4.5	500	0.25	5.0	8.0	150	C5925B
CMZ5926BQ	10.45	11	11.55	34.1	5.5	550	0.25	1.0	8.4	136	C5926B
CMZ5927BQ	11.40	12	12.60	31.2	6.5	550	0.25	1.0	9.1	125	C5927B
CMZ5928BQ	12.35	13	13.65	28.8	7.0	550	0.25	1.0	9.9	115	C5928B
CMZ5929BQ	14.25	15	15.75	25.0	9.0	600	0.25	1.0	11.4	100	C5929B
CMZ5930BQ	15.20	16	16.80	23.4	10	600	0.25	1.0	12.2	94	C5930B
CMZ5931BQ	17.10	18	18.90	20.8	12	650	0.25	1.0	13.7	83	C5931B
CMZ5932BQ	19.00	20	21.00	18.7	14	650	0.25	1.0	15.2	75	C5932B

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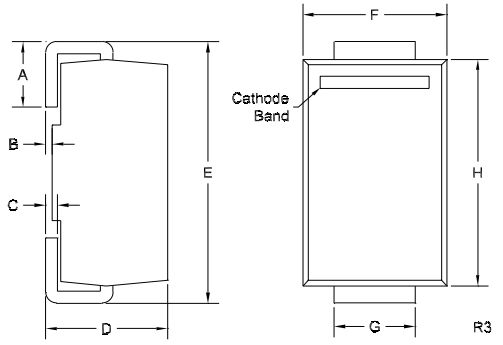
ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C) V_F=1.5V MAX @ I_F=200mA (for all types)

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	
CMZ5933BQ	20.90	22	23.10	17.0	17.5	650	0.25	1.0	16.7	68	C5933B
CMZ5934BQ	22.80	24	25.20	15.6	19	700	0.25	1.0	18.2	63	C5934B
CMZ5935BQ	25.65	27	28.35	13.9	23	700	0.25	1.0	20.6	56	C5935B
CMZ5936BQ	28.50	30	31.50	12.5	26	750	0.25	1.0	22.8	50	C5936B
CMZ5937BQ	31.35	33	34.65	11.4	33	800	0.25	1.0	25.1	45	C5937B
CMZ5938BQ	34.20	36	37.80	10.4	38	850	0.25	1.0	27.4	42	C5938B
CMZ5939BQ	37.05	39	40.95	9.6	45	900	0.25	1.0	29.7	38	C5939B
CMZ5940BQ	40.85	43	45.15	8.7	53	950	0.25	1.0	32.7	35	C5940B
CMZ5941BQ	44.65	47	49.35	8.0	67	1000	0.25	1.0	35.8	32	C5941B
CMZ5942BQ	48.45	51	53.55	7.3	70	1100	0.25	1.0	38.8	29	C5942B
CMZ5943BQ	53.20	56	58.80	6.7	86	1300	0.25	1.0	42.6	27	C5943B
CMZ5944BQ	58.90	62	65.10	6.0	100	1500	0.25	1.0	47.1	24	C5944B
CMZ5945BQ	64.60	68	71.40	5.5	120	1700	0.25	1.0	51.7	22	C5945B

SMA CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.030	0.060	0.76	1.52
B	0.002	0.008	0.05	0.20
C	0.006	0.012	0.15	0.30
D	0.078	0.103	1.98	2.62
E	0.188	0.220	4.78	5.59
F	0.090	0.115	2.29	2.92
G	0.050	0.070	1.27	1.78
H	0.157	0.181	3.99	4.60

SMA (REV:R3)

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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