BZV55C2V4 THRU BZV55C75

SURFACE MOUNT SILICON ZENER DIODES 0.5 WATT, 2.4 THRU 75 VOLT ± 5% TOLERANCE

SOD-80 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR BZV55C2V4 series are high quality, highly reliable silicon Zener diodes designed for use in all types of commercial, industrial, entertainment, computer, and automotive applications.

MARKING: CATHODE BAND

MAXIMUM RATINGS: (T_A=25°C unless otherwise noted)	**SYMBOL**		**UNITS**
Average Forward Current	I_O	250	mA
Peak Repetitive Forward Current	I_{FRM}	250	mA
Power Dissipation (T_L=50°C)	P_D	500	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200	°C

ELECTRICAL CHARACTERISTICS: (T_A=25°C) V_F=1.1V 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
	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
BZV55C2V4	2.280	2.4	2.520	5.0	100	600	1.0	50	1.0	208
BZV55C2V7	2.565	2.7	2.835	5.0	100	600	1.0	20	1.0	185
BZV55C3V0	2.850	3.0	3.150	5.0	95	600	1.0	10	1.0	167
BZV55C3V3	3.135	3.3	3.465	5.0	95	600	1.0	5.0	1.0	152
BZV55C3V6	3.420	3.6	3.780	5.0	90	600	1.0	5.0	1.0	139
BZV55C3V9	3.705	3.9	4.095	5.0	90	600	1.0	3.0	1.0	128
BZV55C4V3	4.085	4.3	4.515	5.0	90	600	1.0	3.0	1.0	116
BZV55C4V7	4.465	4.7	4.935	5.0	80	500	1.0	3.0	2.0	106
BZV55C5V1	4.845	5.1	5.355	5.0	60	480	1.0	2.0	2.0	96
BZV55C5V6	5.320	5.6	5.880	5.0	40	400	1.0	1.0	2.0	89
BZV55C6V2	5.890	6.2	6.510	5.0	10	150	1.0	3.0	4.0	81
BZV55C6V8	6.460	6.8	7.140	5.0	15	80	1.0	2.0	4.0	74
BZV55C7V5	7.125	7.5	7.875	5.0	15	80	1.0	1.0	5.0	67
BZV55C8V2	7.790	8.2	8.610	5.0	15	80	1.0	0.7	5.0	61
BZV55C9V1	8.645	9.1	9.555	5.0	15	100	1.0	0.5	6.0	55
BZV55C10	9.500	10	10.50	5.0	20	150	1.0	0.1	7.0	50
BZV55C11	10.45	11	11.55	5.0	20	150	1.0	0.1	8.0	45

R3 (13-March 2015)

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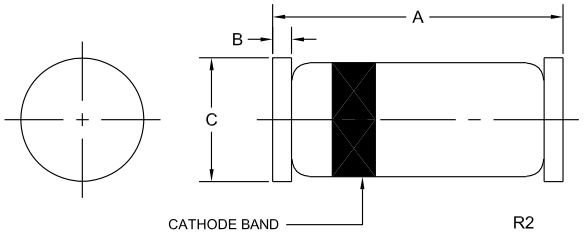
0.5 WATT, 2.4 THRU 75 VOLT
± 5% TOLERANCE

ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C) V_F=1.1V 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
	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
BZV55C12	11.40	12	12.60	5.0	25	150	1.0	0.1	8.0	42
BZV55C13	12.35	13	13.65	5.0	30	170	1.0	0.1	8.0	38
BZV55C15	14.25	15	15.75	5.0	30	200	1.0	0.05	10.5	33
BZV55C16	15.20	16	16.80	5.0	40	200	1.0	0.05	11.2	31
BZV55C18	17.10	18	18.90	5.0	45	225	1.0	0.05	12.6	28
BZV55C20	19.00	20	21.00	5.0	55	225	1.0	0.05	14.0	25
BZV55C22	20.90	22	23.10	5.0	55	250	1.0	0.05	15.4	23
BZV55C24	22.80	24	25.20	5.0	70	250	1.0	0.05	16.8	21
BZV55C27	25.65	27	28.35	2.0	80	300	0.5	0.05	18.9	19
BZV55C30	28.50	30	31.50	2.0	80	300	0.5	0.05	21.0	17
BZV55C33	31.35	33	34.65	2.0	80	325	0.5	0.05	23.1	15
BZV55C36	34.20	36	37.80	2.0	90	350	0.5	0.05	25.2	14
BZV55C39	37.05	39	40.95	2.0	130	350	0.5	0.05	27.3	13
BZV55C43	40.85	43	45.15	2.0	150	375	0.5	0.05	30.1	12
BZV55C47	44.65	47	49.35	2.0	170	375	0.5	0.05	32.9	11
BZV55C51	48.45	51	53.55	2.0	180	400	0.5	0.05	35.7	9.9
BZV55C56	53.20	56	58.80	2.0	200	425	0.5	0.05	39.2	8.9
BZV55C62	58.90	62	65.10	2.0	215	450	0.5	0.05	43.4	8.0
BZV55C68	64.60	68	71.40	2.0	240	475	0.5	0.05	47.6	7.4
BZV55C75	71.25	75	78.75	2.0	255	500	0.5	0.05	52.5	6.7

SOD-80 CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.130	0.146	3.30	3.71
B	0.014		0.35	
C (DIA)	0.049	0.067	1.25	1.70

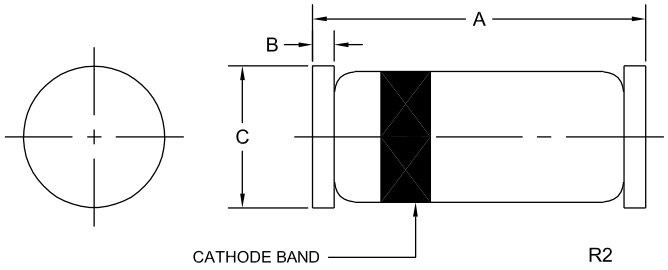
SOD-80 (REV:R2)

MARKING: CATHODE BAND

R3 (13-March 2015)

Package Details
SOD-80 Case

Mechanical Drawing



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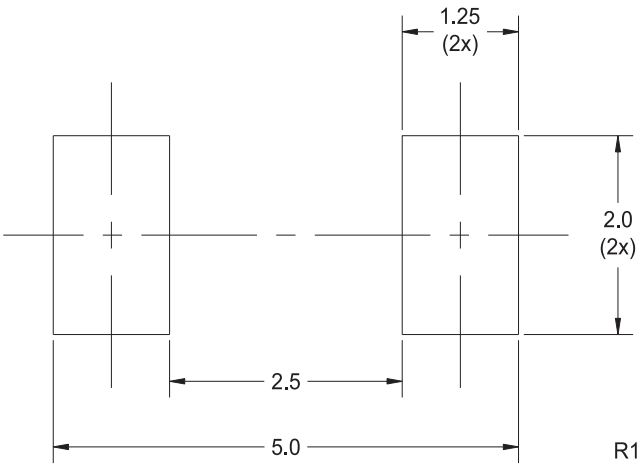
SOD-80 (REV:R2)

Part Marking: Cathode Band

Mounting Pad Geometry (Dimensions in mm)

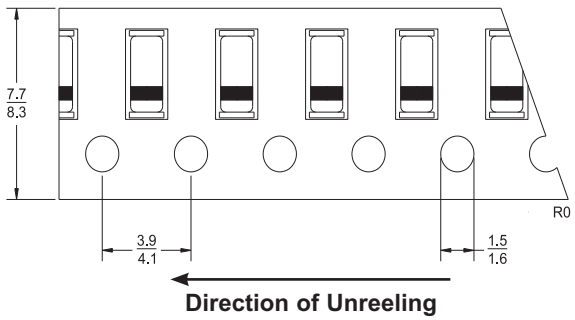


R3 (4-March 2010)

Package Details
SOD-80 Case

Tape Dimensions and Orientation (Dimensions in mm)

Tape Width: 8mm



Devices are taped in accordance with Electronic Industries Association Standard EIA-481-1-A

Packaging Base

7” Reel = 2,500 pcs.

Reel Labeling Information

Each reel is labeled with the following information:
Central Part Number, Customer Part Number, Purchase Order Number, Quantity, Lot Number, Date Code, Ship Date and Marking Code.

Reel Packing Information

Reel Size	Reels per Box (Maximum)	Parts per Box (Maximum)	Box Dimensions		Shipping Weight (Max.)	
			INCH	CM	LB	KG
7”	8	20,000	9x9x5	23x23x13	4	2
	17	42,500	9x9x9	23x23x23	8	4
	40	100,000	21x9x9	53x23x23	17	8
	108	270,000	27x9x17	69x23x43	45	21

Ordering Information

- For devices taped and reeled on 7” reels, add TR suffix to part number.
- All SMDs are available in small quantities for prototype and manual placement applications.

Material Composition Specification

SOD-80 Case

Device average mass . . . . . **28 mg**

Fluctuation margin . . . . . **+/-10%**

Component	Material	Material		Substance	CAS No.	Substance		
		(%wt)	(mg)			(%wt)	(mg)	(ppm)
active device	doped Si	0.11%	0.03	Si	7440-21-3	0.11%	0.03	1,071
leadframe	Fe alloy w/ silver plating	56.32%	15.77	Cu	7440-50-8	8.93%	2.5	89,286
				Fe	7439-89-6	23.93%	6.7	239,286
				Ni	7440-02-0	21.07%	5.9	210,714
				Ag	7440-22-4	2.39%	0.67	23,929
encapsulation	glass	40.0%	11.2	SiO_2	7631-86-9	16.96%	4.75	169,643
				Pb	7439-92-1	23.04%	6.45	230,357
plating*	tin/lead process	3.57%	1.0	Sn	7440-31-5	2.86%	0.8	28,571
				Pb	7439-92-1	0.71%	0.2	7,143
	matte tin	3.57%	1.0	Sn	7440-31-5	3.57%	1.0	35,714

*For Lead Free plating, add suffix “PB FREE” to part number.
For Tin/Lead plating, add suffix “TIN/LEAD” to part number.
No suffix designation allows for the supply of either lead-free or tin/lead plated product depending on availability.

Disclaimer
The information provided in this Material Composition data sheet is, to the best of our knowledge, correct. However, there is no guarantee to completeness or accuracy, as some information is derived from data sources outside the company.

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		(%wt)	(mg)			(%wt)	(mg)	(ppm)
active device	doped Si	0.11%	0.03	Si	7440-21-3	0.11%	0.03	1,071
leadframe	Fe alloy w/ silver plating	56.32%	15.77	Cu	7440-50-8	8.93%	2.5	89,286
				Fe	7439-89-6	23.93%	6.7	239,286
				Ni	7440-02-0	21.07%	5.9	210,714
				Ag	7440-22-4	2.39%	0.67	23,929
encapsulation	glass	40.0%	11.2	SiO_2	7631-86-9	16.96%	4.75	169,643
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