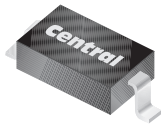
CMHZ5221B THRU CMHZ5267B

SURFACE MOUNT
SILICON ZENER DIODE
2.4 VOLTS THRU 75 VOLTS
500mW, 5% TOLERANCE



SOD-123 CASE

Central Semiconductor™

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMHZ5221B Series Silicon Zener Diode is a high quality voltage regulator, manufactured in a surface mount package, designed for use in industrial, commercial, entertainment and computer applications.

MARKING CODE: SEE MARKING CODE ON ELECTRICAL CHARACTERISTIC TABLE

MAXIMUM RATINGS:	**SYMBOL**		**UNIT**
Power Dissipation (@T_L=75°C)	P_D	500	mW
Maximum Operating Junction Temperature	T_J	+150	°C
Storage Temperature	T_{stg}	-65 to +175	°C
Thermal Resistance	Θ_{JL}	150	°C/W

Note: V_Z Tolerance “B” suffix = ±5%, V_Z Tolerance “C” suffix = ±2%, V_Z Tolerance “D” suffix = ±1%

ELECTRICAL CHARACTERISTICS: (T_A=25°C), V_F=0.9V MAX @ I_F=10mA (for all types)

TYPE	ZENER VOLTAGE V_Z @ I_{ZT}			TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAX. TEMP. COEFF.	MARKING CODE
	MIN	NOM	MAX	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @	I_{ZK}	I_R @	V_R	ΘV_Z	
	V	V	V	mA	Ω	Ω	mA	µA	V	%/°C	
CMHZ5221B	2.280	2.4	2.520	20	30	1200	0.25	100	1.0	-0.085	CC1
CMHZ5222B	2.375	2.5	2.625	20	30	1250	0.25	100	1.0	-0.085	CC2
CMHZ5223B	2.565	2.7	2.835	20	30	1300	0.25	75	1.0	-0.080	CC3
CMHZ5224B	2.660	2.8	2.940	20	30	1400	0.25	75	1.0	-0.080	CC4
CMHZ5225B	2.850	3.0	3.150	20	30	1600	0.25	50	1.0	-0.075	CC5
CMHZ5226B	3.135	3.3	3.465	20	28	1600	0.25	25	1.0	-0.070	CD1
CMHZ5227B	3.420	3.6	3.780	20	24	1700	0.25	15	1.0	-0.065	CD2
CMHZ5228B	3.705	3.9	4.095	20	23	1900	0.25	10	1.0	-0.060	CD3
CMHZ5229B	4.085	4.3	4.515	20	22	2000	0.25	5.0	1.0	±0.055	CD4
CMHZ5230B	4.465	4.7	4.935	20	19	1900	0.25	5.0	2.0	±0.030	CD5
CMHZ5231B	4.845	5.1	5.355	20	17	1600	0.25	5.0	2.0	±0.030	CE1
CMHZ5232B	5.320	5.6	5.880	20	11	1600	0.25	5.0	3.0	+0.038	CE2
CMHZ5233B	5.700	6.0	6.300	20	7.0	1600	0.25	5.0	3.5	+0.038	CE3
CMHZ5234B	5.890	6.2	6.510	20	7.0	1000	0.25	5.0	4.0	+0.045	CE4
CMHZ5235B	6.460	6.8	7.140	20	5.0	750	0.25	3.0	5.0	+0.050	CE5
CMHZ5236B	7.125	7.5	7.875	20	6.0	500	0.25	3.0	6.0	+0.058	CF1
CMHZ5237B	7.790	8.2	8.610	20	8.0	500	0.25	3.0	6.5	+0.062	CF2
CMHZ5238B	8.265	8.7	9.135	20	8.0	600	0.25	3.0	6.5	+0.065	CF3
CMHZ5239B	8.645	9.1	9.555	20	10	600	0.25	3.0	7.0	+0.068	CF4
CMHZ5240B	9.500	10	10.50	20	17	600	0.25	3.0	8.0	+0.075	CF5
CMHZ5241B	10.45	11	11.55	20	22	600	0.25	2.0	8.4	+0.076	CH1
CMHZ5242B	11.40	12	12.60	20	30	600	0.25	1.0	9.1	+0.077	CH2
CMHZ5243B	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9	+0.079	CH3
CMHZ5244B	13.30	14	14.70	9.0	15	600	0.25	0.1	10	+0.082	CH4
CMHZ5245B	14.25	15	15.75	8.5	16	600	0.25	0.1	11	+0.082	CH5
CMHZ5246B	15.20	16	16.80	7.8	17	600	0.25	0.1	12	+0.083	CJ1
CMHZ5247B	16.15	17	17.85	7.4	19	600	0.25	0.1	13	+0.084	CJ2
CMHZ5248B	17.10	18	18.90	7.0	21	600	0.25	0.1	14	+0.085	CJ3
CMHZ5249B	18.05	19	19.95	6.6	23	600	0.25	0.1	14	+0.086	CJ4
CMHZ5250B	19.00	20	21.00	6.2	25	600	0.25	0.1	15	+0.086	CJ5
CMHZ5251B	20.90	22	23.10	5.6	29	600	0.25	0.1	17	+0.087	CK1
CMHZ5252B	22.80	24	25.20	5.2	33	600	0.25	0.1	18	+0.087	CK2
CMHZ5253B	23.75	25	26.25	5.0	35	600	0.25	0.1	19	+0.089	CK3

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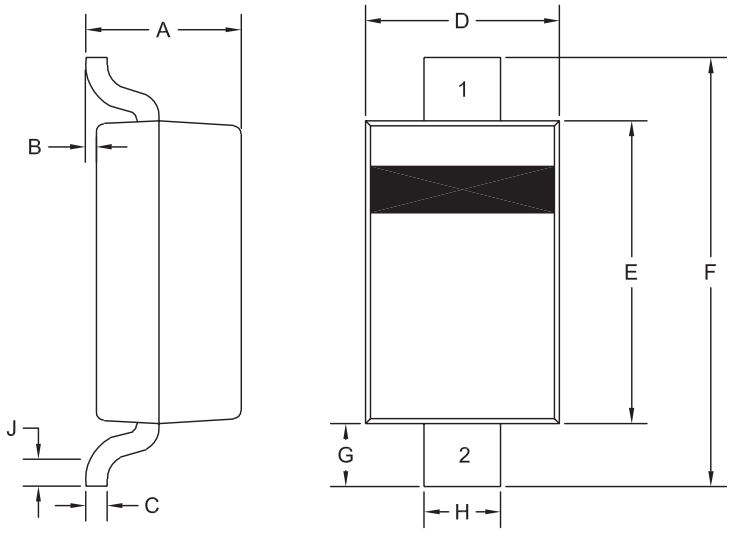
TYPE	ZENER VOLTAGE V_Z @ I_{ZT}			TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAX. TEMP. COEFF.	MARKING CODE
	MIN	NOM	MAX	I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK} @	I_{ZK}	I_R @	V_R	ΘV_Z	
	V	V	V	mA	Ω	Ω	mA	μA	V	%/°C	
CMHZ5254B	25.65	27	28.35	4.6	41	600	0.25	0.1	21	+0.090	CK4
CMHZ5255B	26.60	28	29.40	4.5	44	600	0.25	0.1	21	+0.091	CK5
CMHZ5256B	28.50	30	31.50	4.2	49	600	0.25	0.1	23	+0.091	CM1
CMHZ5257B	31.35	33	34.65	3.8	58	700	0.25	0.1	25	+0.092	CM2
CMHZ5258B	34.20	36	37.80	3.4	70	700	0.25	0.1	27	+0.093	CM3
CMHZ5259B	37.05	39	40.95	3.2	80	800	0.25	0.1	30	+0.094	CM4
CMHZ5260B	40.85	43	45.15	3.0	93	900	0.25	0.1	33	+0.095	CM5
CMHZ5261B	44.65	47	49.35	2.7	105	1000	0.25	0.1	36	+0.095	CN1
CMHZ5262B	48.45	51	53.55	2.5	125	1100	0.25	0.1	39	+0.096	CN2
CMHZ5263B	53.20	56	58.80	2.2	150	1300	0.25	0.1	43	+0.096	CN3
CMHZ5264B	57.00	60	63.00	2.1	170	1400	0.25	0.1	46	+0.097	CN4
CMHZ5265B	58.90	62	65.10	2.0	185	1400	0.25	0.1	47	+0.097	CN5
CMHZ5266B	64.60	68	71.40	1.8	230	1600	0.25	0.1	52	+0.097	CP1
CMHZ5267B	71.25	75	78.75	1.7	270	1700	0.25	0.1	56	+0.098	CP2

Higher Zener voltages may be available upon request. Please consult factory.

SOD-123 CASE - MECHANICAL OUTLINE



R5

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.037	0.053	0.95	1.35
B	0.000	0.005	0.00	0.12
C	-	0.008	-	0.20
D	0.055	0.071	1.40	1.80
E	0.098	0.110	2.50	2.80
F	0.142	0.154	3.60	3.90
G	0.016	-	0.40	-
H	0.020	0.028	0.50	0.70
J	0.010	-	0.25	-

SOD-123 (REV:R5)

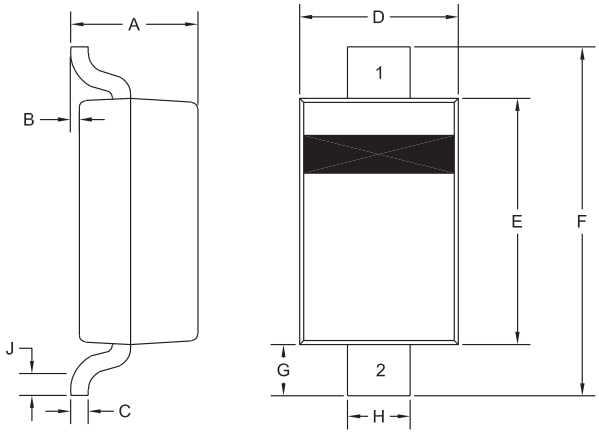
LEAD CODE:
1) Cathode
2) Anode

R10 (18-January 2024)

Package Details
SOD-123 Case

Central Semiconductor Corp.

Mechanical Drawing



R5

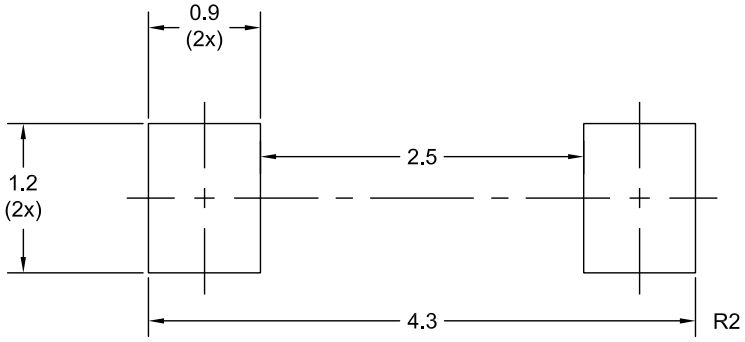
DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.037	0.053	0.95	1.35
B	0.000	0.005	0.00	0.12
C	-	0.008	-	0.20
D	0.055	0.071	1.40	1.80
E	0.098	0.110	2.50	2.80
F	0.142	0.154	3.60	3.90
G	0.016	-	0.40	-
H	0.020	0.028	0.50	0.70
J	0.010	-	0.25	-

SOD-123 (REV:R5)

Lead Code:
1) Cathode
2) Anode

Part Marking: 3 Character Alpha/Numeric Code

Mounting Pad Geometry (Dimensions in mm)



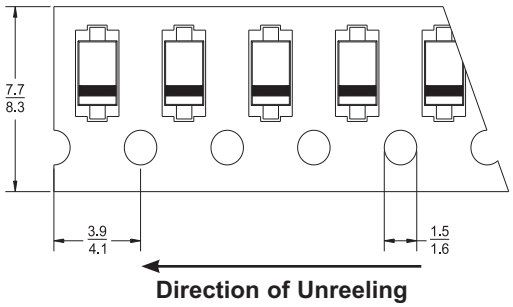
R2

R4 (5-August 2010)

Package Details
SOD-123 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 = 3,000 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	24,000	9x9x5	23x23x13	4	2
	17	51,000	9x9x9	23x23x23	7	4
	40	120,000	21x9x9	53x23x23	14	7
	108	324,000	27x9x17	69x23x43	39	18

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-123 Case

Device average mass . . . . . **10.2 mg**

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

Component	Material	Material		Substance	CAS No.	Substance		
		(%wt)	(mg)			(%wt)	(mg)	(ppm)
active device	doped Si	0.59%	0.06	Si	7440-21-3	0.59%	0.06	5,882
bond wire	gold or copper	0.1%	0.01	Au	7440-57-5	0.1%	0.01	980
				Cu	7440-50-8			
leadframe	alloy 42 w/ silver plating	21.18%	2.16	Fe	7439-89-6	12.27%	1.252	122,745
				Ni	7440-02-0	8.47%	0.864	84,706
				Ag	7440-22-4	0.43%	0.044	4,314
encapsulation*	EMC	77.75%	7.93	silica	7631-86-9	52.87%	5.392	528,669
				epoxy resin	29690-82-2	15.55%	1.586	155,486
				phenol resin	9003-35-4	7.77%	0.793	77,743
				Sb_2O_3	1309-64-4	0.78%	0.079	7,776
				Br	7726-95-6	0.78%	0.079	7,776
	EMC GREEN	77.75%	7.93	silica (fused)	60676-86-0	59.87%	6.106	598,657
				epoxy resin	29690-82-2	7.77%	0.793	77,743
				phenol resin	9003-35-4	7.54%	0.769	75,412
				carbon black	1333-86-4	0.23%	0.024	2,331
				metal hydroxide	1309-42-8	2.33%	0.238	23,308
plating**	tin/lead process	0.39%	0.04	Sn	7440-31-5	0.31%	0.032	3,137
				Pb	7439-92-1	0.08%	0.008	784
	matte tin	0.39%	0.04	Sn	7440-31-5	0.39%	0.04	3,922

*EMC GREEN molding compound is Halogen-Free.

**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.

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SOD-123 Case

Device average mass . . . . . **10.2 mg**

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

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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

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
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Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centralsemi.com

Worldwide Field Representatives:
www.centralsemi.com/wwreps

Worldwide Distributors:
www.centralsemi.com/wwdistributors

https://www.centralsemi.com

Product End of Life Notification

PDN ID:	PDN01284
Notification Date:	1/30/26
Last Buy Date:	7/30/26
Last Shipment Date	1/30/27

Summary:The CMHZ5242B Zener diode is discontinued and now classified as End of Life (EOL).

Although Central Semiconductor makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Portfolio Management. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

*** All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.**

Central Part Number	Suggested Replacement
CMHZ5242B TR	N/A

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. If you would like assistance, please visit https://my.centralsemi.com/submit-inquiry?type=ER to submit an online inquiry.