

CMPZ4678 THRU CMPZ4717

**SURFACE MOUNT SILICON
LOW LEVEL ZENER DIODES
350mW, 1.8 THRU 43 VOLT
5% TOLERANCE**

**SOT-23 CASE**www.centrasemi.com**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPZ4678 series silicon Zener diode is a highly reliable voltage regulator designed for applications requiring an extremely low operating current and low leakage.

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

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

Power Dissipation

Operating and Storage Temperature

SYMBOL P_D T_J, T_{stg}

350

-65 to +150

UNITS

mW

 $^\circ\text{C}$ **ELECTRICAL CHARACTERISTICS:** ($T_A=25^\circ\text{C}$) $V_F=1.5\text{V MAX}$ @ $I_F=100\text{mA}$ (for all types)

TYPE	ZENER VOLTAGE V _Z @ I _{ZT}			TEST CURRENT	MAXIMUM ZENER IMPEDANCE				MAXIMUM REVERSE CURRENT		MAXIMUM ZENER CURRENT	MARKING CODE
	MIN	NOM	MAX	I _{ZT}	Z _{ZT} @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R @ V _R	I _{ZM}		
	V	V	V	μA	Ω	mA	Ω	mA	μA	V	mA	
CMPZ4678	1.710	1.8	1.890	50	95	5.0	2200	0.25	7.5	1.0	120.0	C9A
CMPZ4679	1.900	2.0	2.100	50	90	5.0	2300	0.25	5.0	1.0	110.0	C9B
CMPZ4680	2.090	2.2	2.310	50	90	5.0	2300	0.25	4.0	1.0	100.0	C9C
CMPZ4681	2.280	2.4	2.520	50	90	5.0	2400	0.25	2.0	1.0	95.0	C9D
CMPZ4682	2.565	2.7	2.835	50	88	5.0	2500	0.25	1.0	1.0	90.0	C9E
CMPZ4683	2.850	3.0	3.150	50	70	5.0	2200	0.25	0.8	1.0	85.0	C9F
CMPZ4684	3.135	3.3	3.465	50	70	5.0	2200	0.25	7.5	1.5	80.0	C9G
CMPZ4685	3.420	3.6	3.780	50	50	5.0	2050	0.25	7.5	2.0	75.0	C9H
CMPZ4686	3.705	3.9	4.095	50	50	5.0	2050	0.25	5.0	2.0	70.0	C9J
CMPZ4687	4.085	4.3	4.515	50	50	5.0	2050	0.25	4.0	2.0	65.0	C9K
CMPZ4688	4.465	4.7	4.935	50	25	5.0	1800	0.25	10	3.0	60.0	C9L
CMPZ4689	4.845	5.1	5.355	50	25	5.0	1800	0.25	10	3.0	55.0	C9M
CMPZ4690	5.320	5.6	5.880	50	25	5.0	1800	0.25	10	4.0	50.0	C9N
CMPZ4691	5.890	6.2	6.510	50	10	5.0	1300	0.25	10	5.0	45.0	C9P
CMPZ4692	6.460	6.8	7.140	50	8.0	5.0	750	0.25	10	5.1	35.0	C9Q
CMPZ4693	7.125	7.5	7.875	50	7.0	5.0	600	0.25	10	5.7	31.8	C9R
CMPZ4694	7.790	8.2	8.610	50	7.0	5.0	600	0.25	1.0	6.2	29.0	C9S
CMPZ4695	8.265	8.7	9.135	50	9.0	5.0	600	0.25	1.0	6.6	27.4	C9T
CMPZ4696	8.645	9.1	9.555	50	10	5.0	600	0.25	1.0	6.9	26.2	C9U
CMPZ4697	9.500	10	10.50	50	15	5.0	600	0.25	1.0	7.6	24.8	C9V
CMPZ4698	10.45	11	11.55	50	18	5.0	600	0.25	0.05	8.4	21.6	C9W

R11 (14-December 2017)

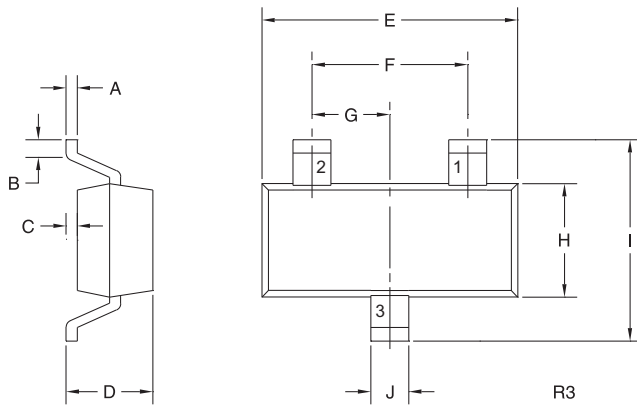
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$) $V_F=1.5\text{V MAX @ } I_F=100\text{mA}$ (for all types)

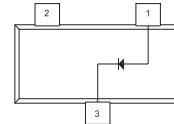
TYPE	ZENER VOLTAGE $V_Z @ I_{ZT}$			TEST CURRENT	MAXIMUM ZENER IMPEDANCE				MAXIMUM REVERSE CURRENT		MAXIMUM ZENER CURRENT	MARKING CODE
	MIN	NOM	MAX		$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		I_{ZM}	
	V	V	V		μA	Ω	mA	Ω	μA	V	mA	
CMPZ4699	11.40	12	12.60	50	22	5.0	600	0.25	0.05	9.1	20.4	C9X
CMPZ4700	12.35	13	13.65	50	25	5.0	600	0.25	0.05	9.8	19.0	C9Y
CMPZ4701	13.30	14	14.70	50	28	5.0	600	0.25	0.05	10.6	17.5	C9Z
CMPZ4702	14.25	15	15.75	50	32	5.0	600	0.25	0.05	11.4	16.3	91A
CMPZ4703	15.20	16	16.80	50	36	5.0	600	0.25	0.05	12.1	15.4	91B
CMPZ4704	16.15	17	17.85	50	39	5.0	600	0.25	0.05	12.9	14.5	91C
CMPZ4705	17.10	18	18.90	50	42	5.0	600	0.25	0.05	13.6	13.2	91D
CMPZ4706	18.05	19	19.95	50	45	5.0	600	0.25	0.05	14.4	12.5	91E
CMPZ4707	19.00	20	21.00	50	48	5.0	600	0.25	0.01	15.2	11.9	91F
CMPZ4708	20.90	22	23.10	50	55	5.0	600	0.25	0.01	16.7	10.8	91G
CMPZ4709	22.80	24	25.20	50	62	5.0	600	0.25	0.01	18.2	9.9	91H
CMPZ4710	23.75	25	26.25	50	66	5.0	600	0.25	0.01	19.0	9.5	91J
CMPZ4711	25.65	27	28.35	50	70	5.0	600	0.25	0.01	20.4	8.8	91K
CMPZ4712	26.60	28	29.40	50	74	5.0	600	0.25	0.01	21.2	8.5	91L
CMPZ4713	28.50	30	31.50	50	78	5.0	600	0.25	0.01	22.8	7.9	91M
CMPZ4714	31.35	33	34.65	50	88	5.0	700	0.25	0.01	25.0	7.2	91N
CMPZ4715	34.20	36	37.80	50	95	5.0	700	0.25	0.01	27.3	6.6	91P
CMPZ4716	37.05	39	40.95	50	130	5.0	800	0.25	0.01	29.6	6.1	91Q
CMPZ4717	40.85	43	45.15	50	150	2.0	900	0.25	0.01	32.6	5.5	91R

SOT-23 CASE - MECHANICAL OUTLINE

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

LEAD CODE:
1) Anode
2) No Connection
3) Cathode



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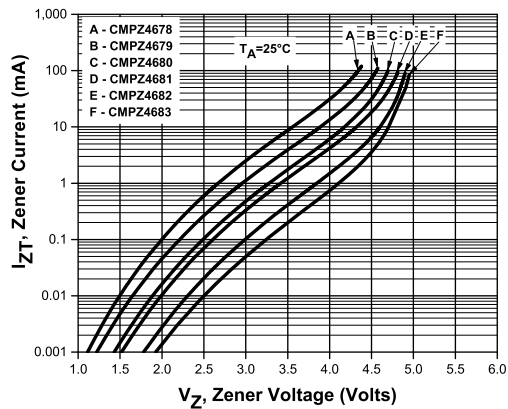
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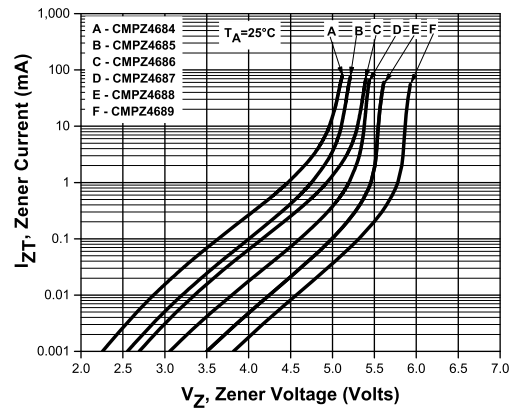


TYPICAL ELECTRICAL CHARACTERISTICS

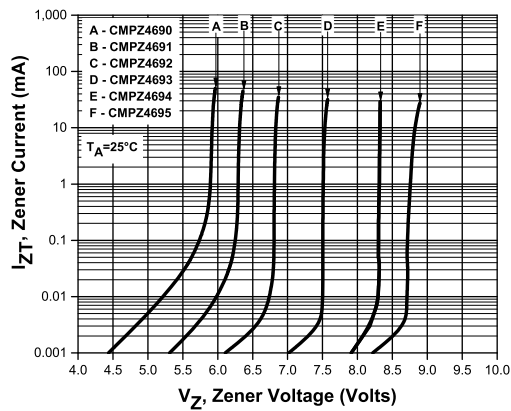
Zener Voltage, CMPZ4678-CMPZ4683



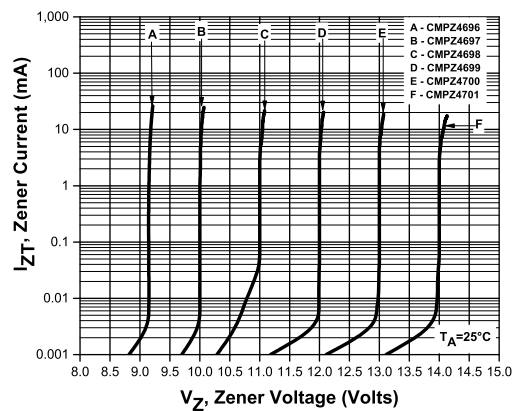
Zener Voltage, CMPZ4684-CMPZ4689



Zener Voltage, CMPZ4690-CMPZ4695



Zener Voltage, CMPZ4696-CMPZ4701



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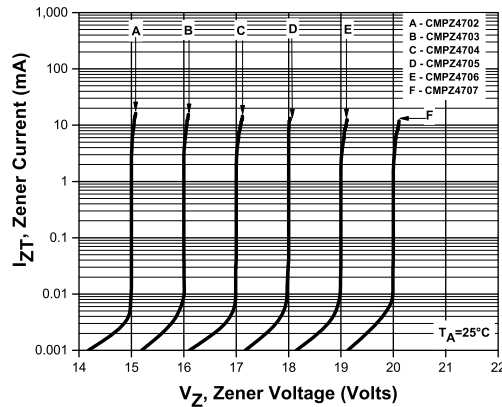
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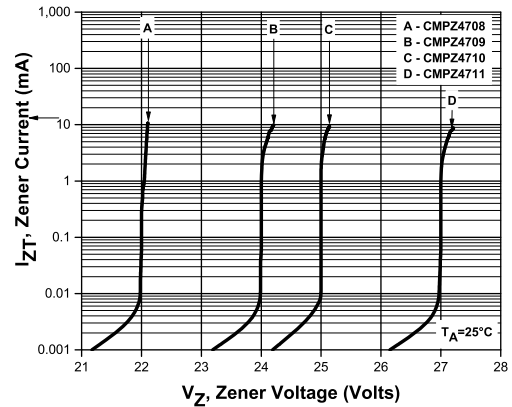


TYPICAL ELECTRICAL CHARACTERISTICS

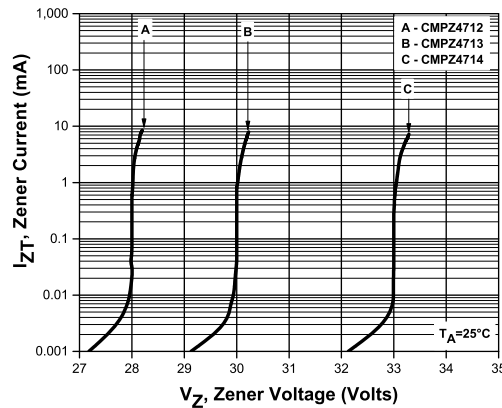
Zener Voltage, CMPZ4702-CMPZ4707



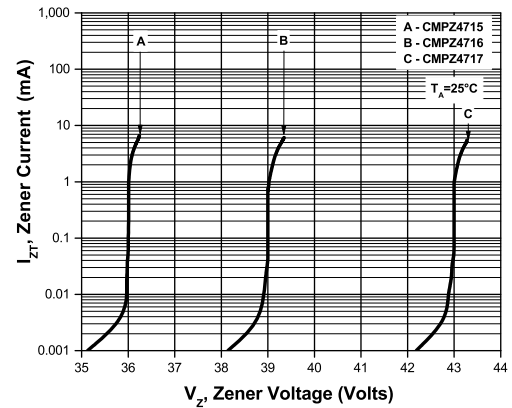
Zener Voltage, CMPZ4708-CMPZ4711



Zener Voltage, CMPZ4712-CMPZ4714



Zener Voltage, CMPZ4715-CMPZ4717



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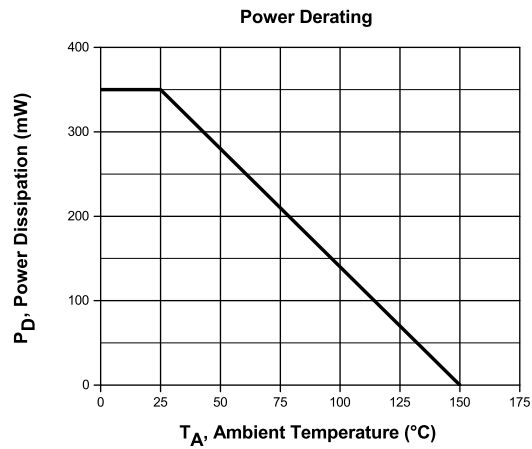
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TYPICAL ELECTRICAL CHARACTERISTICS



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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).

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