

Microsemi Corp.

The diode experts

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1.5KCD6.8 thru 1.5KCD200A, CD5908 and CD6267 thru CD6303A Transient Suppressor CELLULAR DIE PACKAGE

APPLICATION

This TAZ* series has a peak pulse power rating of 1500 watts for one millisecond. It can protect integrated circuits, hybrids, CMOS, MOS and other voltage sensitive components that are used in a broad range of applications including: telecommunications, power supplies, computers, automotive, industrial and medical equipment. TAZ* devices have become very important as a consequence of their high surge capability, extremely fast response time and low clamping voltage.

The cellular die (CD) package is ideal for use in hybrid applications and for solder mounting. The cellular design in hybrids assures ample bonding with immediate heat sinking to provide the required transient peak pulse power of 1500 watts.

FEATURES

- ✓ Economical
- ✓ 1500 Watts peak pulse power dissipation
- ✓ Stand-Off voltages from 5.0V to 171V
- ✓ Uses thermally passivated die design
- ✓ Additional silicone protective coating over die for rugged environments
- ✓ Stringent process norm screening
- ✓ Low leakage current at rated stand-off voltage
- ✓ Exposed metal surfaces are readily solderable
- ✓ 100% lot traceability
- ✓ Manufactured in the U.S.A.
- ✓ Meets JEDEC IN6267 - IN6303A electrically equivalent specifications
- ✓ Available in bipolar configuration
- ✓ Additional transient suppressor ratings and sizes are available as well as zener, rectifier and reference diode configurations. Consult factory for special requirements.

MAXIMUM RATINGS

1500 Watts of Peak Pulse Power Dissipation at 25°C**

clamping (0 Volts to BV Min.):

unidirectional $< 1 \times 10^{-12}$ seconds;

bidirectional $< 5 \times 10^{-9}$ seconds;

Operating and Storage Temperature: -65°C to +175°C

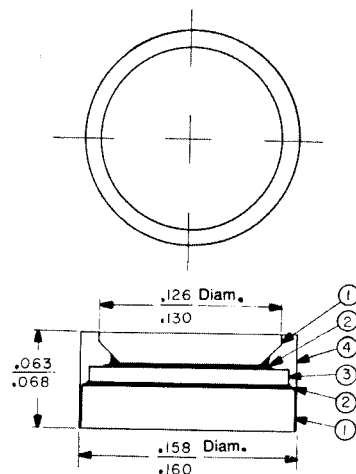
Forward Surge Rating: 200 Amps, 1/120 second at 25°C

Steady State Power Dissipation is heat sink dependent.

*Transient Absorption Zener

**Wire contact or tab geometry for interconnects should be selected with adequate cross-sectional size to prevent fusing relative to peak pulse current rating (Ipp).

PACKAGE DIMENSIONS



Item Number	Description
1.....	Nickel and Silver Plated Copper Discs
2.....	Solder Bond
3.....	Silicon Die
4.....	Conformal coating

Illustration Represents Unipolar Only

MECHANICAL CHARACTERISTICS

Case: Nickel and Silver plated copper discs with conformal coating.

Finish: Both external surfaces are corrosion resistant, readily solderable.

Polarity: Large contact side is cathode

Mounting Position: Any

1.5KCD6.8 thru 1.5KCD200A, CD5908 and CD6267 thru CD6303A CELLULAR DIE PACKAGE

ELECTRICAL CHARACTERISTICS @ 25°C

Industry Type Number	JEDEC Type Number Elect. Equiv.	Rated Stand-Off Voltage		Breakdown Voltage V _(BR) VOLTS		Maximum Clamping Voltage @ I _{PP} (1 mSEC)	Maximum Reverse Leakage @ V _{WM}	Rated Maximum Peak Pulse Current	Maximum Temperature Coefficient α VZ
		V _{WM} VOLTS	MIN	MAX	@ I _T mA	V _C VOLTS	μA	I _{PP} A	% / °C
1.5KCD5.8A	CD5908	5.00	6.0	7.48	1	7.6	300	30.0	057
1.5KCD7.5	CD5908	5.90	6.9	8.48	1	8.5	300	39.0	057
1.5KCD10.0	CD5908	6.80	7.8	9.48	1	9.5	300	48.0	057
1.5KCD12.5	CD5908	7.70	8.7	10.48	1	10.5	300	57.0	057
1.5KCD15.0	CD5908	8.60	9.6	11.48	1	11.5	300	66.0	057
1.5KCD17.5	CD5908	9.50	10.5	12.48	1	12.5	300	75.0	057
1.5KCD20.0	CD5908	10.40	11.4	13.48	1	13.5	300	84.0	057
1.5KCD22.5	CD5908	11.30	12.3	14.48	1	14.5	300	93.0	057
1.5KCD25.0	CD5908	12.20	13.2	15.48	1	15.5	300	102.0	057
1.5KCD27.5	CD5908	13.10	14.1	16.48	1	16.5	300	111.0	057
1.5KCD30.0	CD5908	14.00	15.0	17.48	1	17.5	300	120.0	057
1.5KCD32.5	CD5908	14.90	15.9	18.48	1	18.5	300	129.0	057
1.5KCD35.0	CD5908	15.80	16.8	19.48	1	19.5	300	138.0	057
1.5KCD37.5	CD5908	16.70	17.7	20.48	1	20.5	300	147.0	057
1.5KCD40.0	CD5908	17.60	18.6	21.48	1	21.5	300	156.0	057
1.5KCD42.5	CD5908	18.50	19.5	22.48	1	22.5	300	165.0	057
1.5KCD45.0	CD5908	19.40	20.4	23.48	1	23.5	300	174.0	057
1.5KCD47.5	CD5908	20.30	21.3	24.48	1	24.5	300	183.0	057
1.5KCD50.0	CD5908	21.20	22.2	25.48	1	25.5	300	192.0	057
1.5KCD52.5	CD5908	22.10	23.1	26.48	1	26.5	300	201.0	057
1.5KCD55.0	CD5908	23.00	24.0	27.48	1	27.5	300	210.0	057
1.5KCD57.5	CD5908	23.90	24.9	28.48	1	28.5	300	219.0	057
1.5KCD60.0	CD5908	24.80	25.8	29.48	1	29.5	300	228.0	057
1.5KCD62.5	CD5908	25.70	26.7	30.48	1	30.5	300	237.0	057
1.5KCD65.0	CD5908	26.60	27.6	31.48	1	31.5	300	246.0	057
1.5KCD67.5	CD5908	27.50	28.5	32.48	1	32.5	300	255.0	057
1.5KCD70.0	CD5908	28.40	29.4	33.48	1	33.5	300	264.0	057
1.5KCD72.5	CD5908	29.30	30.3	34.48	1	34.5	300	273.0	057
1.5KCD75.0	CD5908	30.20	31.2	35.48	1	35.5	300	282.0	057
1.5KCD77.5	CD5908	31.10	32.1	36.48	1	36.5	300	291.0	057
1.5KCD80.0	CD5908	32.00	33.0	37.48	1	37.5	300	300.0	057
1.5KCD82.5	CD5908	32.90	33.9	38.48	1	38.5	300	309.0	057
1.5KCD85.0	CD5908	33.80	34.8	39.48	1	39.5	300	318.0	057
1.5KCD87.5	CD5908	34.70	35.7	40.48	1	40.5	300	327.0	057
1.5KCD90.0	CD5908	35.60	36.6	41.48	1	41.5	300	336.0	057
1.5KCD92.5	CD5908	36.50	37.5	42.48	1	42.5	300	345.0	057
1.5KCD95.0	CD5908	37.40	38.4	43.48	1	43.5	300	354.0	057
1.5KCD97.5	CD5908	38.30	39.3	44.48	1	44.5	300	363.0	057
1.5KCD100.0	CD5908	39.20	40.2	45.48	1	45.5	300	372.0	057
1.5KCD102.5	CD5908	40.10	41.1	46.48	1	46.5	300	381.0	057
1.5KCD105.0	CD5908	41.00	42.0	47.48	1	47.5	300	390.0	057
1.5KCD107.5	CD5908	41.90	42.9	48.48	1	48.5	300	399.0	057
1.5KCD110.0	CD5908	42.80	43.8	49.48	1	49.5	300	408.0	057
1.5KCD112.5	CD5908	43.70	44.7	50.48	1	50.5	300	417.0	057
1.5KCD115.0	CD5908	44.60	45.6	51.48	1	51.5	300	426.0	057
1.5KCD117.5	CD5908	45.50	46.5	52.48	1	52.5	300	435.0	057
1.5KCD120.0	CD5908	46.40	47.4	53.48	1	53.5	300	444.0	057
1.5KCD122.5	CD5908	47.30	48.3	54.48	1	54.5	300	453.0	057
1.5KCD125.0	CD5908	48.20	49.2	55.48	1	55.5	300	462.0	057
1.5KCD127.5	CD5908	49.10	50.1	56.48	1	56.5	300	471.0	057
1.5KCD130.0	CD5908	50.00	51.0	57.48	1	57.5	300	480.0	057
1.5KCD132.5	CD5908	50.90	51.9	58.48	1	58.5	300	489.0	057
1.5KCD135.0	CD5908	51.80	52.8	59.48	1	59.5	300	498.0	057
1.5KCD137.5	CD5908	52.70	53.7	60.48	1	60.5	300	507.0	057
1.5KCD140.0	CD5908	53.60	54.6	61.48	1	61.5	300	516.0	057
1.5KCD142.5	CD5908	54.50	55.5	62.48	1	62.5	300	525.0	057
1.5KCD145.0	CD5908	55.40	56.4	63.48	1	63.5	300	534.0	057
1.5KCD147.5	CD5908	56.30	57.3	64.48	1	64.5	300	543.0	057
1.5KCD150.0	CD5908	57.20	58.2	65.48	1	65.5	300	552.0	057
1.5KCD152.5	CD5908	58.10	59.1	66.48	1	66.5	300	561.0	057
1.5KCD155.0	CD5908	59.00	60.0	67.48	1	67.5	300	570.0	057
1.5KCD157.5	CD5908	59.90	60.9	68.48	1	68.5	300	579.0	057
1.5KCD160.0	CD5908	60.80	61.8	69.48	1	69.5	300	588.0	057
1.5KCD162.5	CD5908	61.70	62.7	70.48	1	70.5	300	597.0	057
1.5KCD165.0	CD5908	62.60	63.6	71.48	1	71.5	300	606.0	057
1.5KCD167.5	CD5908	63.50	64.5	72.48	1	72.5	300	615.0	057
1.5KCD170.0	CD5908	64.40	65.4	73.48	1	73.5	300	624.0	057
1.5KCD172.5	CD5908	65.30	66.3	74.48	1	74.5	300	633.0	057
1.5KCD175.0	CD5908	66.20	67.2	75.48	1	75.5	300	642.0	057
1.5KCD177.5	CD5908	67.10	68.1	76.48	1	76.5	300	651.0	057
1.5KCD180.0	CD5908	68.00	69.0	77.48	1	77.5	300	660.0	057
1.5KCD182.5	CD5908	68.90	69.9	78.48	1	78.5	300	669.0	057
1.5KCD185.0	CD5908	69.80	70.8	79.48	1	79.5	300	678.0	057
1.5KCD187.5	CD5908	70.70	71.7	80.48	1	80.5	300	687.0	057
1.5KCD190.0	CD5908	71.60	72.6	81.48	1	81.5	300	696.0	057
1.5KCD192.5	CD5908	72.50	73.5	82.48	1	82.5	300	705.0	057
1.5KCD195.0	CD5908	73.40	74.4	83.48	1	83.5	300	714.0	057
1.5KCD197.5	CD5908	74.30	75.3	84.48	1	84.5	300	723.0	057
1.5KCD200.0	CD5908	75.20	76.2	85.48	1	85.5	300	732.0	057
1.5KCD202.5	CD5908	76.10	77.1	86.48	1	86.5	300	741.0	057
1.5KCD205.0	CD5908	77.00	78.0	87.48	1	87.5	300	750.0	057
1.5KCD207.5	CD5908	77.90	78.9	88.48	1	88.5	300	759.0	057
1.5KCD210.0	CD5908	78.80	79.8	89.48	1	89.5	300	768.0	057
1.5KCD212.5	CD5908	79.70	80.7	90.48	1	90.5	300	777.0	057
1.5KCD215.0	CD5908	80.60	81.6	91.48	1	91.5	300	786.0	057
1.5KCD217.5	CD5908	81.50	82.5	92.48	1	92.5	300	795.0	057
1.5KCD220.0	CD5908	82.40	83.4	93.48	1	93.5	300	804.0	057
1.5KCD222.5	CD5908	83.30	84.3	94.48	1	94.5	300	813.0	057
1.5KCD225.0	CD5908	84.20	85.2	95.48	1	95.5	300	822.0	057
1.5KCD227.5	CD5908	85.10	86.1	96.48	1	96.5	300	831.0	057
1.5KCD230.0	CD5908	86.00	87.0	97.48	1	97.5	300	840.0	057
1.5KCD232.5	CD5908	86.90	87.9	98.48	1	98.5	300	849.0	057
1.5KCD235.0	CD5908	87.80	88.8	99.48	1	99.5	300	858.0	057
1.5KCD237.5	CD5908	88.70	89.7	100.48	1	100.5	300	867.0	057
1.5KCD240.0	CD5908	89.60	90.6	101.48	1	101.5	300	876.0	057
1.5KCD242.5	CD5908	90.50	91.5	102.48	1	102.5	300	885.0	057
1.5KCD245.0	CD5908	91.40	92.4	103.48	1	103.5	300	894.0	057
1.5KCD247.5	CD5908	92.30	93.3	104.48	1	104.5	300	903.0	057
1.5KCD250.0	CD5908	93.20	94.2	105.48	1	105.5	300	912.0	057
1.5KCD252.5	CD5908	94.10	95.1	106.48	1	106.5	300	921.0	057
1.5KCD255.0	CD5908	95.00	96.0	107.48	1	107.5	300	930.0	057
1.5KCD257.5	CD5908	95.90	96.9	108.48	1	108.5	300	939.0	057
1.5KCD260.0	CD5908	96.80	97.8	109.48	1	109.5	300	948.0	057
1.5KCD262.5	CD5908	97.70	98.7	110.48	1	110.5	300	957.0	057
1.5KCD265.0	CD5908	98.60	99.6	111.48	1	111.5	300	966.0	057
1.5KCD267.5	CD5908	99.50	100.5	112.48	1	112.5	300	975.0	057
1.5KCD270.0	CD5908	100.40	101.4	113.48	1	113.5	300	984.0	057
1.5KCD272.5	CD5908	101.30	102.3	114.48	1	114.5	300	993.0	057
1.5KCD275.0	CD5908	102.20	103.2	115.48	1	115.5	300	1002.0	057
1.5KCD277.5	CD5908	103.10	104.1	116.48	1	116.5	300	1011.0	057
1.5KCD280.0	CD5908	104.00	105.0	117.48	1	117.5	300	1020.0	057
1.5KCD282.5	CD5908	104.90	105.9	118.48	1	118.5	300	1029.0	057
1.5KCD285.0	CD5908	105.80	106.8	119.48	1	119.5	300	1038.0	057
1.5KCD287.5	CD5908	106.70	107.7	120.48	1	120.5	300	1047.0	057
1.5KCD290.0	CD5908	107.60	108.6	121.48	1	121.5	300	1056.0	057
1.5KCD292.5	CD5908	108.50	109.5	122.48	1	122.5	300	1065.0	057
1.5KCD295.0	CD5908	109.40	110.4	123.48	1	123.5	300	1074.0	057
1.5KCD297.5	CD5908	110.30	111.3	124.48	1</				