Kokomo Semiconductor

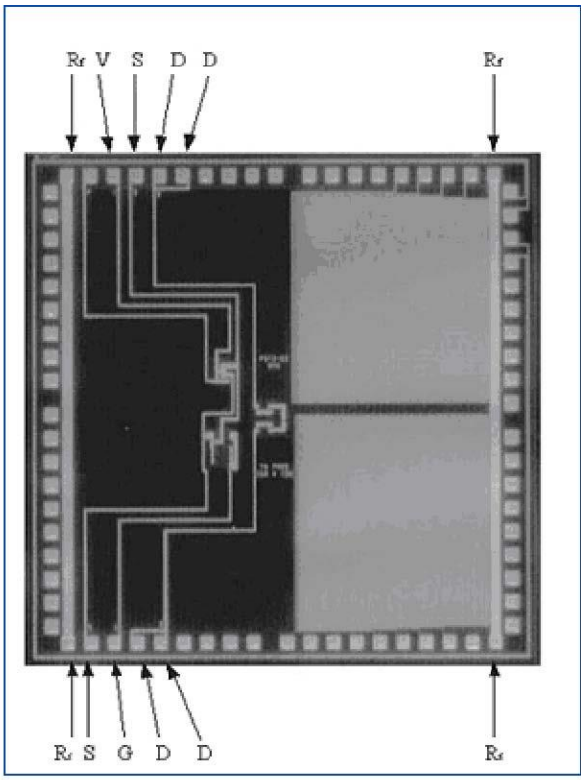
A UNIT OF: GM Components Holdings, LLC

PST3-02 Thermal Test Die

The Kokomo Semiconductor PST series of Thermal Test Die is used to determine thermal characteristics of a package, such as thermal resistance Junction to Case (Θ jc) or Junction to Ambient (Θ ja). These Thermal Test Die incorporate a heating element and typically, two independent methods for on-die temperature monitoring.

Resistive heating in the PST3 is accomplished by driving a current through a doped silicon well between a pair of bus bars, labeled Rs and Rf. The 4 "R" labeled pads accommodate Kelvin connections, if desired

At the top and bottom of the die are a pair of pads, labeled D in the diagram, which connect a serial five-diode temperature sense network. Again, a four-pad layout allows Kelvin connections, if desired. A second temperature monitoring circuit uses a bridge network by connecting the "V" at the top of the die and the "G" at the bottom of the die with one sense pin "S" at the top of the die and the other sense pin "S" at the bottom of the die.



➢ Options Available

- Five-inch wafer, no bumps, nitride passivation, 120-micron square passivation openings for wire bonding.

➢ IC Fab Information

• Wafer size	5-inch (125 mm)
• Die thickness	610-660 microns
• Metal thickness	24k angstroms
• Metal composition	Al/Cu/Si (98/1/1)
• Passivation thickness	10k angstroms
• Passivation type	Nitride
• Silicon orientation	1-1-1
• Silicon type	P

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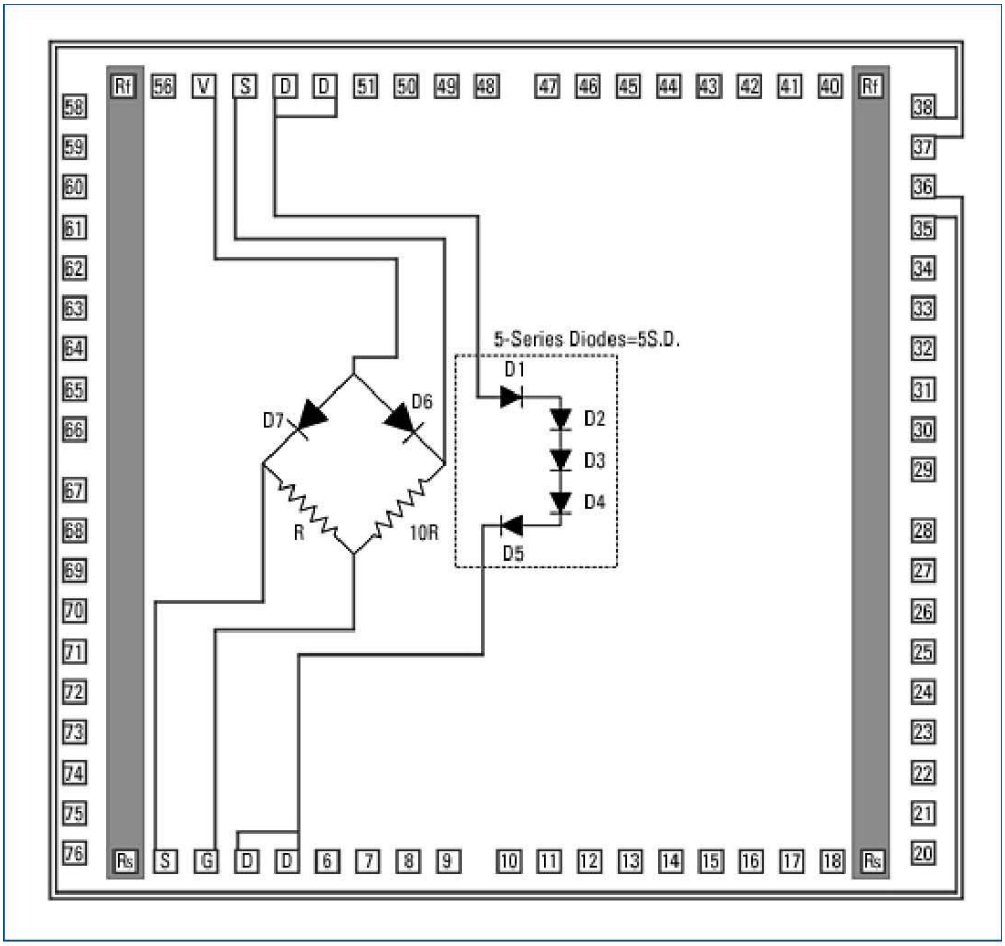

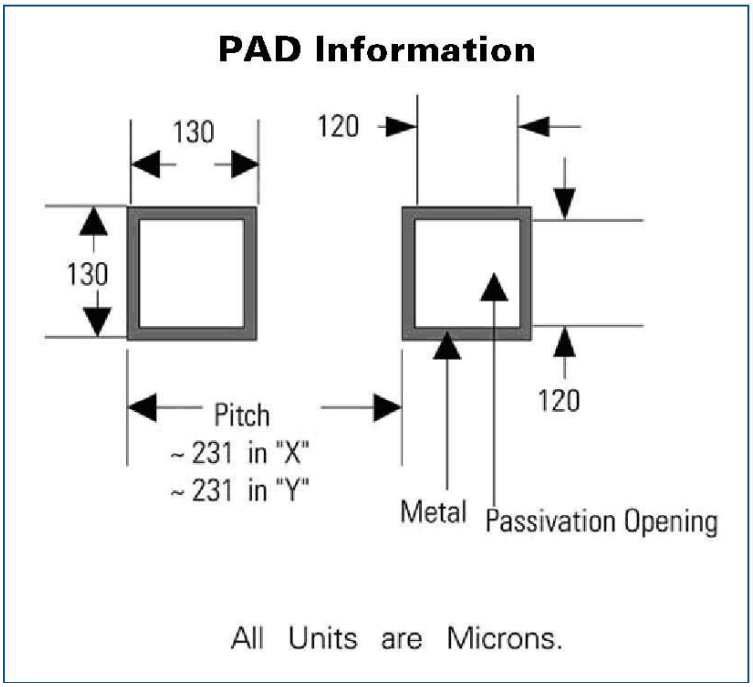

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PST3-02 / X,Y Coordinates .200-Inch X .200-Inch Die Sizes (0,0) is located at the center of the die.							
Microns				Microns			
PIN#	NAME	X	Y	PIN#	NAME	X	Y
1	Rs(1)	-2122	-2286	39	Rf(1)	2122	2286
2	S(1)	-1892	-2286	40	Pin40	1892	2286
3	G	-1662	-2286	41	Pin41	1662	2286
4	D(1)	-1432	-2286	42	Pin42	1432	2286
5	D(2)	-1202	-2286	43	Pin43	1202	2286
6	Pin6	-972	-2286	44	Pin44	972	2286
7	Pin7	-742	-2286	45	Pin45	742	2286
8	Pin8	-512	-2286	46	Pin46	512	2286
9	Pin9	-282	-2286	47	Pin47	282	2286
10	Pin10	52	-2286	48	Pin48	-52	2286
11	Pin11	282	-2286	49	Pin49	-282	2286
12	Pin12	512	-2286	50	Pin50	-512	2286
13	Pin13	742	-2286	51	Pin51	-742	2286
14	Pin14	972	-2286	52	D(3)	-972	2286
15	Pin15	1202	-2286	53	D(4)	-1202	2286
16	Pin16	1432	-2286	54	S(2)	-1432	2286
17	Pin17	1662	-2286	55	V	-1662	2286
18	Pin18	1892	-2286	56	Pin56	-1892	2286
19	Rs(2)	2122	-2286	57	Rf(2)	-2122	2286
20	Pin20	2286	-2122	58	Pin58	-2286	2122
21	Pin21	2286	-1892	59	Pin59	-2286	1892
22	Pin22	2286	-1662	60	Pin60	-2286	1662
23	Pin23	2286	-1432	61	Pin61	-2286	1432
24	Pin24	2286	-1202	62	Pin62	-2286	1202
25	Pin25	2286	-972	63	Pin63	-2286	972
26	Pin26	2286	-742	64	Pin64	-2286	742
27	Pin27	2286	-512	65	Pin65	-2286	512
28	Pin28	2286	-282	66	Pin66	-2286	282
29	Pin29	2286	52	67	Pin67	-2286	-52
30	Pin30	2286	282	68	Pin68	-2286	-282
31	Pin31	2286	512	69	Pin69	-2286	-512
32	Pin32	2286	742	70	Pin70	-2286	-742
33	Pin33	2286	972	71	Pin71	-2286	-972
34	Pin34	2286	1202	72	Pin72	-2286	-1202
35	Pin35	2286	1432	73	Pin73	-2286	-1432
36	Pin36	2286	1662	74	Pin74	-2286	-1662
37	Pin37	2286	1892	75	Pin75	-2286	-1892
38	Pin38	2286	2122	76	Pin76	-2286	-2122

The test die offered on this web site is to be used to characterize assembly processes and materials. Applying the data from the test die to a functional system is the responsibility of the user. Kokomo Semiconductor makes no warranty, express or implied including the implied warranties of merchantability and fitness for a particular purpose, that the user's system designed using that data will perform as intended.

