

GENERAL DESCRIPTION

The 9598 features silicon bipolar junction transistor switching for driving low power PIN diode switches. The driver is compatible with 3.3/5.0 V CMOS logic and has 4 independent inverting channels to supply output high and low up to ± 30 mA at ± 5 V supplies

External current limiting resistors are required to set output current

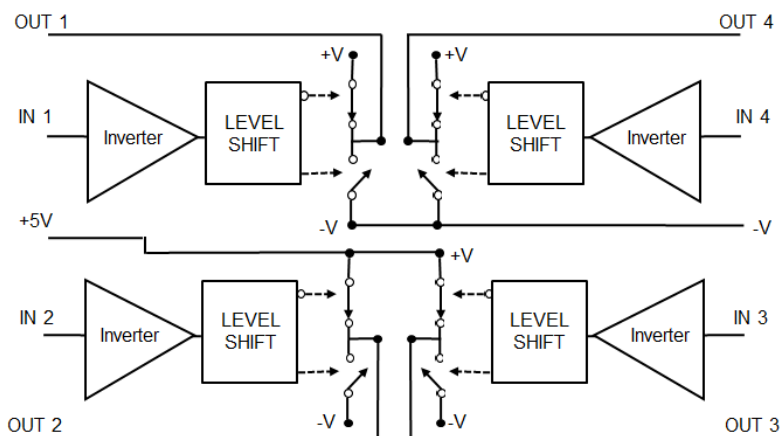
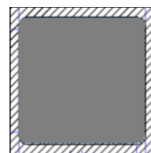
FEATURES

- All silicon BJT design for Radiation immunity
- Hermetic package for high reliability

MECHANICAL

The 9598 consists of a monolithic silicon BJT array of NPN and PNP transistors mounted on an Alumina substrate and sealed in a hermetic alumina 6mm square 36 POS .5 pitch QFN. This surface mount driver is designed for integration into an Integrated Microwave Assembly.

9598 contains no solder and is RoHS compliant



TRUTH TABLE							
INPUTS				OUTPUTS			
IN1	IN2	IN3	IN4	OUT 1	OUT 2	OUT 3	OUT 4
0	0	0	0	+mA	+mA	+mA	+mA
1	0	0	0	-mA	+mA	+mA	+mA
0	1	0	0	+mA	-mA	+mA	+mA
0	0	1	0	+mA	+mA	-mA	+mA
0	0	0	1	+mA	+mA	+mA	-mA

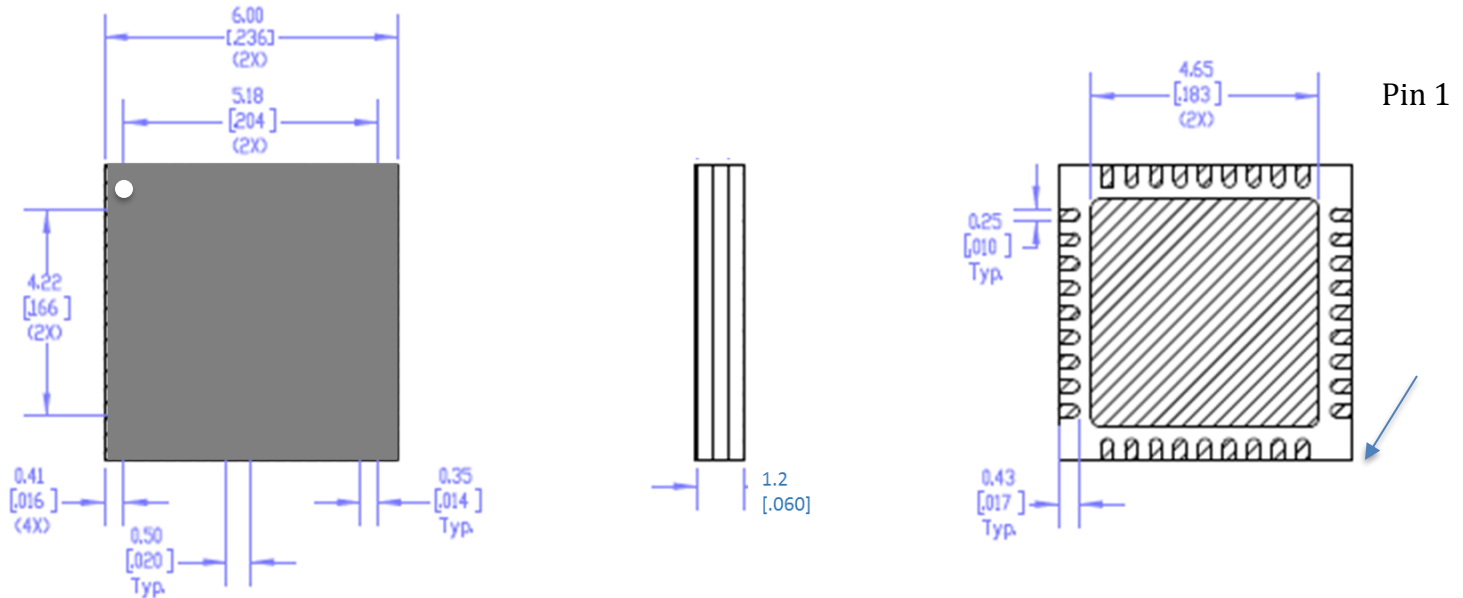
PIN CONNECTION

Pin		Pin	
1	IN 1	36	+5V
2	NC	35	NC
3	-5V	34	IN 4
4	NC	33	NC
5	Pull Down 1	32	Bias 4B
6	NC	31	NC
7	OUT 1	30	OUT 4
8	NC	29	NC
9	Pull Down 2	28	Bias 4A
10	NC	27	Pull Down 4
11	Bias 2A	26	NC
12	NC	25	OUT 3
13	OUT 2	24	NC
14	NC	23	Bias 3
15	Bias 2B	22	NC
16	NC	21	IN 3
17	IN 2	20	NC
18	NC	19	+5V

. Recommend bypassing +V and -V with .1 uf capacitor or .01 uf minimum

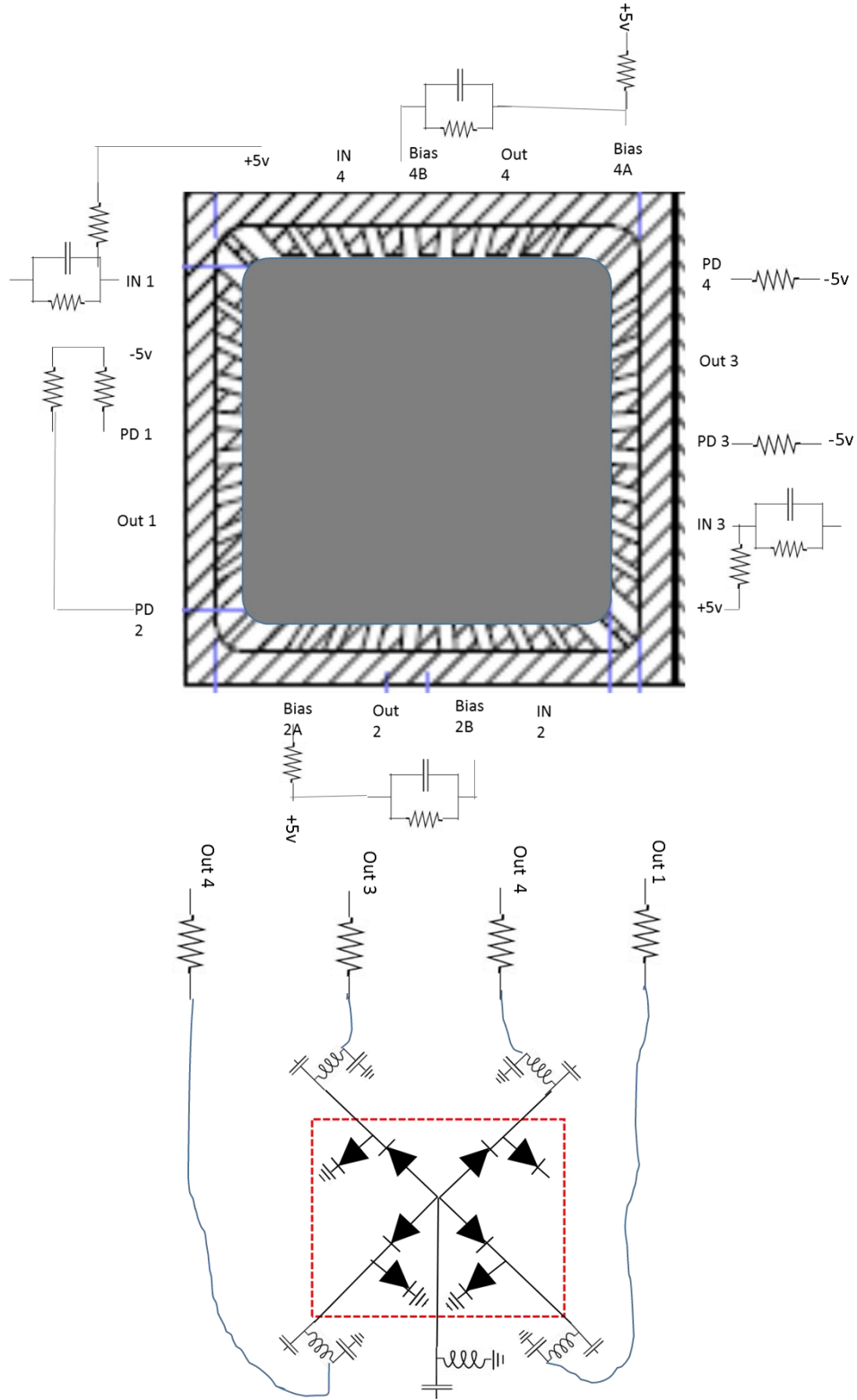
ELECTRICAL SPECIFICATIONS $V_{+} = +5V$ $V_{-} = -5V$, 25 C 50 KHz PRR

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
Input						
V_{IH}	Logic 1 Input Voltage	CMOS	4.0	4.5	5.0	V
V_{IL}	Logic 0 Input Voltage	CMOS	0	.4	.8	V
Output						
V_{OH}	Voltage Out High	Open load	3.8	4.1	4.8	V
V_{OL}	Voltage Out Low	Open load	-3.8	-4.1	-4.8	V
I_{OH}	Current Out High	Steady State into 1v diode load		20		mA
I_{OL}	Current Out Low	Steady State into 1v diode load common arm resistor		-20		mA
I_{OPK}	Peak Output Current	Sink		-100		mA
Supply						
$+I_{QC}$	+ Quiescent Current	50 KHz 50% duty cycle		40		mA
$-I_{QC}$	- Quiescent Current	50 KHz 50% duty cycle		-40		mA
Dynamic						
t_R	Rise Time			10		nS
t_F	Fall Time			10		nS
T_{Doff}	Turn Off Delay			35		nS
T_{Don}	Turn On Delay			20		nS
T_{SWoff}	Switching Speed Off	10 pf load		60		nS
T_{SWon}	Switching Speed On	10 pf load		45		nS



Impellimax Line of Drivers

Application example



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