Quad +5V/-5V PIN Diode Switch Driver

GENERAL DESCRIPTION

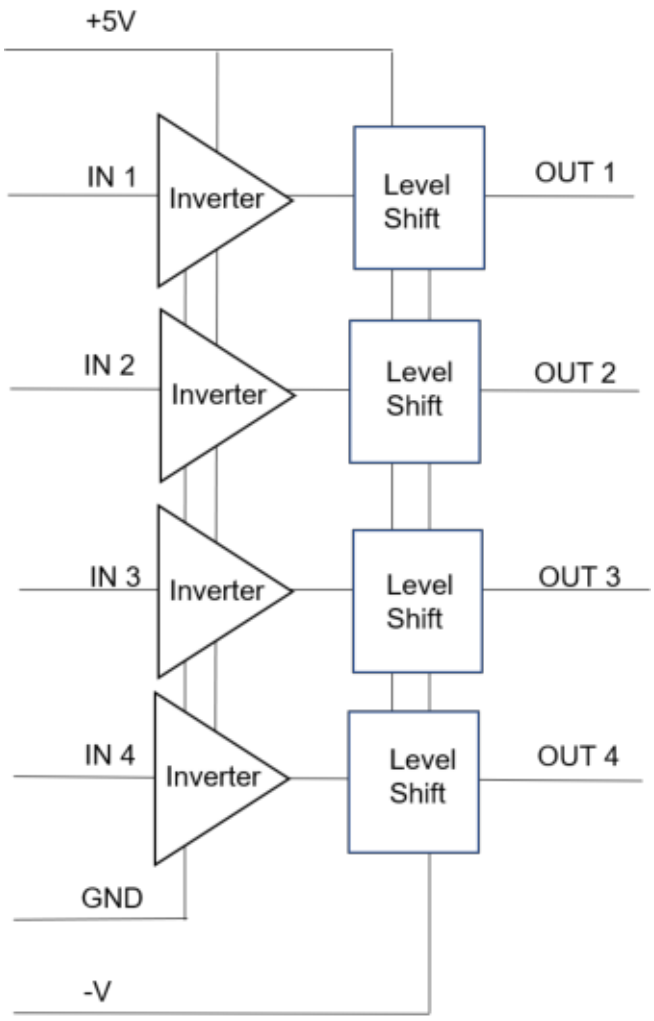
The 99208 is a driver featuring high speed suited for driving high speed PIN diode switches.
The driver is compatible with TTL /CMOS logic and has 4 independent inverting channels to supply output high and low up to +/-100 mA at +5V and -5V to -7V output.

External current limiting resistors are required to set current

FEATURES

- high speed <5 nS
- Inverting outputs
- Compatible with CMOS FPGA Outputs

FUNCTION BLOCK DIAGRAM



MECHANICAL

The 99208 consists of silicon BJT's mounted on a laminate substrate and sealed with a Dam and Fill process. This forms a 6mm x 6mm 10 POS DFN SMT assembly designed for integration into an Integrated Microwave Assembly .

ECCN Code EAR99

99208 is RoHS 3 (EU 2015/863) compliant.



PIN CONNECTIONS

Recommend bypassing Vpos and Vneg with .1 uf capacitor minimum.

1	+5V
2	OUT 1
3	Input 1
4	OUT 2
5	Input 2
6	OUT 3
7	Input 3
8	OUT 4
9	Input 4
10	--V (-5V to -7V)

TRUTH TABLE

IN1	IN2	IN3	IN4	OUT1	OUT2	OUT3	OUT4
1	1	1	1	-V	-V	-V	-V
0	1	1	1	+V	-V	-V	-V
1	0	1	1	-V	+V	-V	-V
1	1	0	1	-V	-V	+V	-V
1	1	1	0	-V	-V	-V	+V
0	0	0	0	+V	+V	+V	+V

ELECTRICAL SPECIFICATIONS

Vpos +5V, Vneg -5V, TEMP 25C, PRR 500KHz

	SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
INPUT							
	VI_hi	Voltage Input High	TTL/CMOS	2.5	4.5	5.0	V
	VI_low	Voltage Input Low	TTL/CMOS	0	.2	.5	V
OUTPUT							
	VO_hi	Voltage Out High	open load	4.5	4.8	5.0	V
	VO_low	Voltage Out Low	open load	-4.5	-4.8	-5.0	V
	IO_hi	Current Out High	steady state into 1V diode load		50		mA
	IO_low	Current Out Low	steady state into 1V diode load		50		mA
	Iopk	Current Peak Output	sink and source	+/-300			mA
SUPPLY							
	IQC_pos	Quiescent Current Positive	per driver		.1		mA
	IQC_neg	Quiescent Current Negative	per driver		-.1		mA
DYNAMIC							
	TSW_rise	Switching Speed Rise	opposed 1N4148 diode load		5	6	nS
	TSW_fall	Switching Speed Fall	opposed 1N4148 diode load		5	6	nS
	PRR	Pulse Repetition Rate	Max, 10pF load		.5	1	MHz

ESD Sensitivity HBM Class 1B

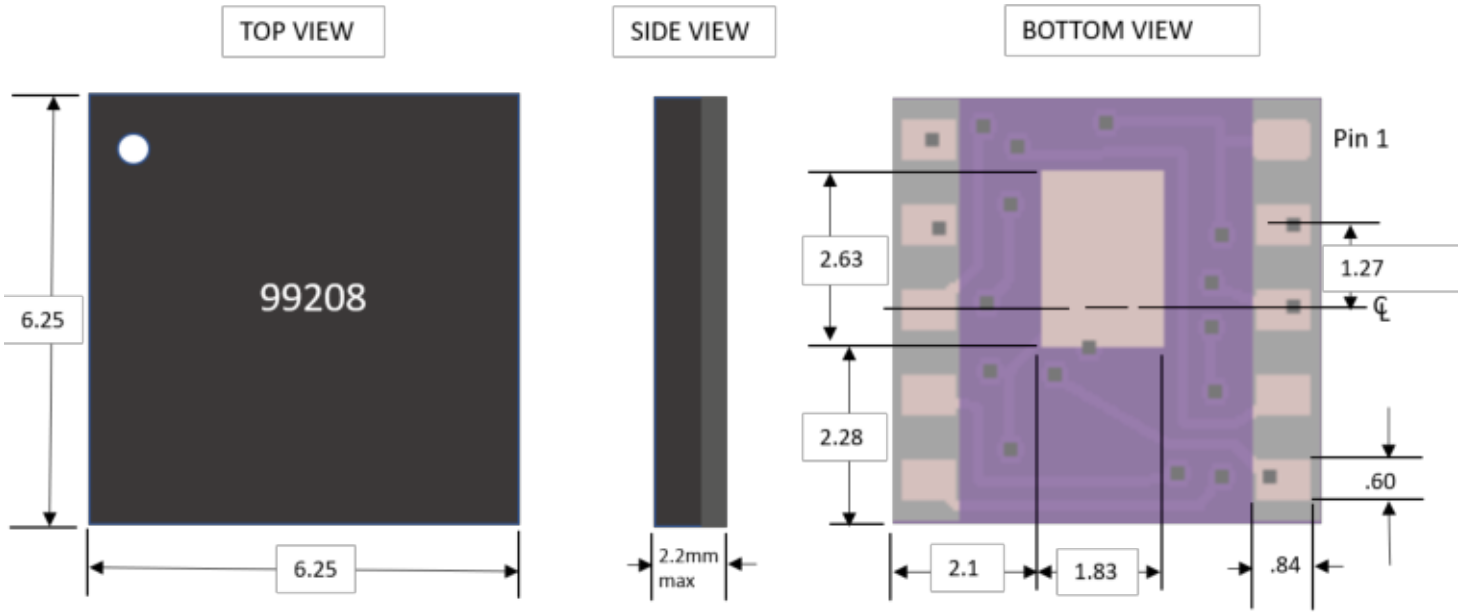
MECHANICAL SPECIFICATIONS

DRAWING NOT TO SCALE. DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE NOTED.

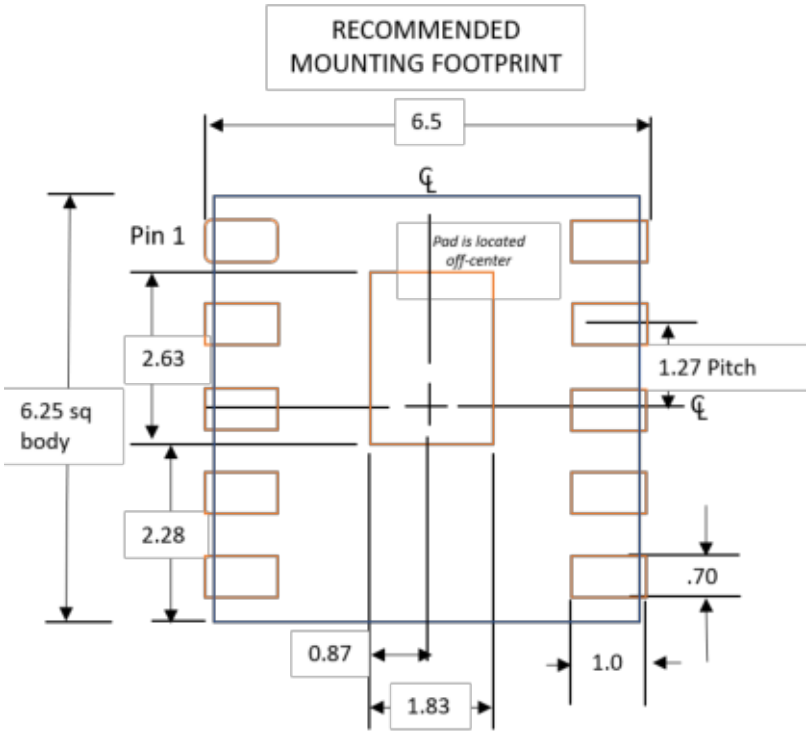
MSL RATING 4 (refer to JEDEC STD 033B)
Shipping Packaging
Waffle Packs/trays

MARKING SPECIFICATIONS

Part Number: CKHEM



FOOTPRINT



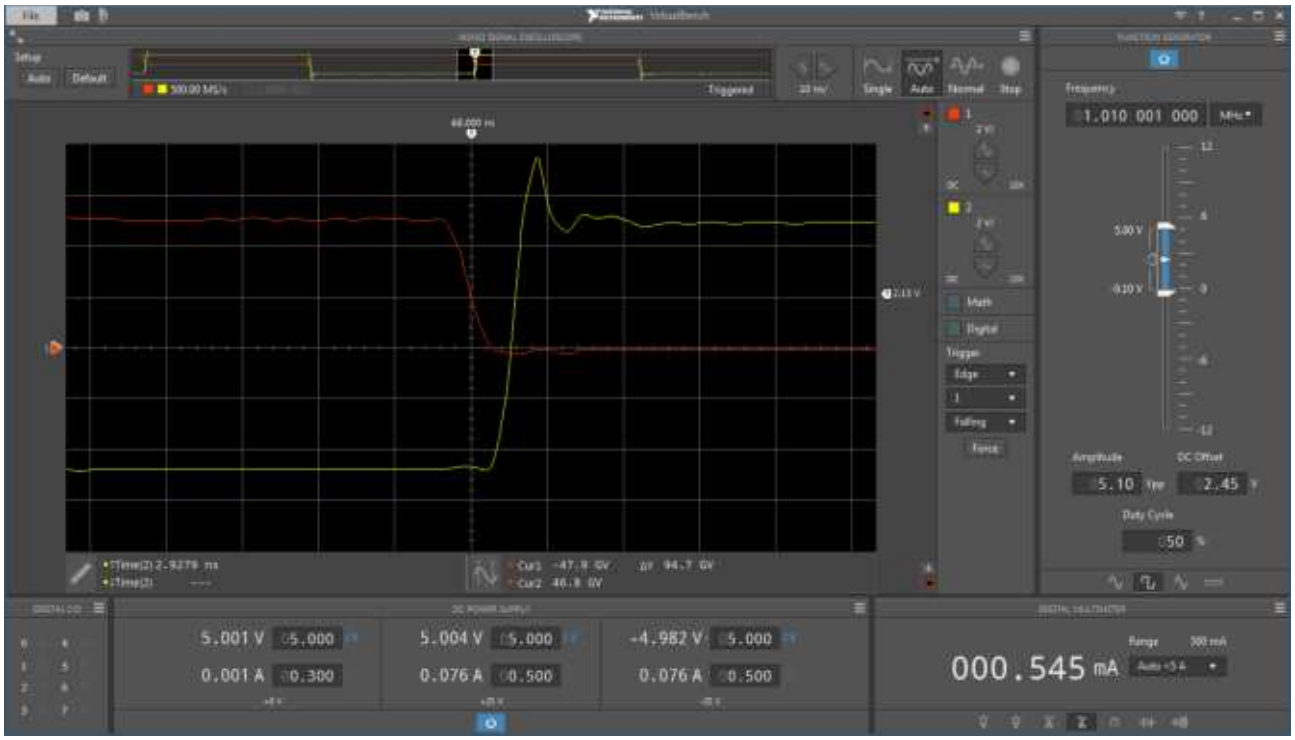
WAVEFORM



WAVEFORM

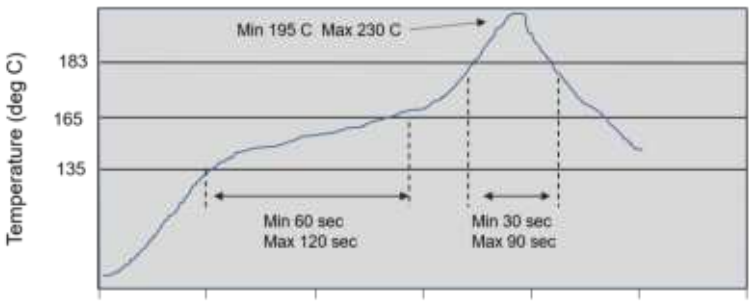


WAVEFORM



SOLDER PROFILE

SnPb Temperature Profile example



Pb-Free Temperature Profile example

