

GENERAL DESCRIPTION

The 9209 is a driver featuring high speed suited for driving high speed high power PIN diode switches.

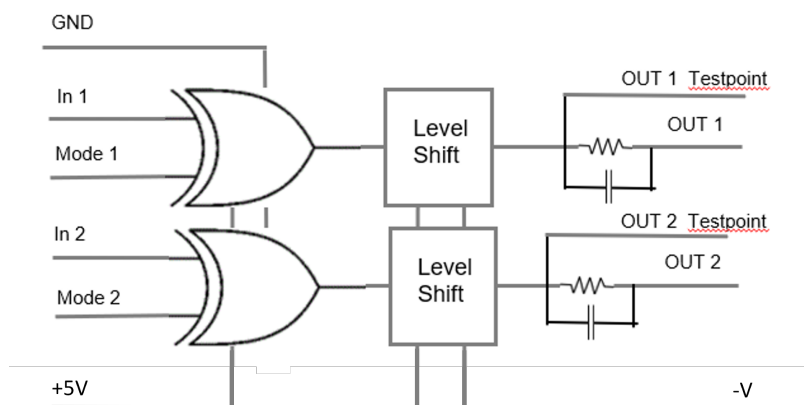
The driver is compatible with TTL logic and has 2 independent channels. Channels provide Exclusive-Or logic function. Apply logic low to one input to cause the remaining input to be noninverting. Allow one input to float hi (or pull high) to cause the remaining input to be inverting.

Each driver nominally supplies +25 mA into 1V load and -10V into back bias PIN diode.

FEATURES

- high speed <15 nS
- Inverting or Non-Inverting operation with mode control
- * internal current limiting

FUNCTION BLOCK DIAGRAM



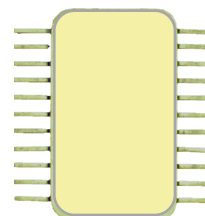
MECHANICAL

The 9209 is constructed as a chipscale laminate within a package. The driver is housed in a .375 x .625 22 lead package designed for integration into an integrated microwave assembly.

9209 is RoHS compliant.

ECCN Code EAR99

9209 is RoHS 3 (EU 2015/863) compliant.



PIN CONNECTIONS

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

Mode control and input pins are interchangeable within one channel

- | | |
|----|-------------|
| 1 | -5V to-12V |
| 2 | Output 1 |
| 3 | Testpoint 1 |
| 4 | Input 1 |
| 5 | Mode 1 |
| 6 | Ground |
| 7 | Input 2 |
| 8 | Mode 2 |
| 9 | Testpoint 2 |
| 10 | Output 2 |
| 11 | +5V |
| 12 | NC |
| 13 | NC |
| 14 | NC |
| 15 | NC |
| 16 | NC |
| 17 | NC |
| 18 | NC |
| 19 | NC |
| 20 | NC |
| 21 | NC |
| 22 | NC |

TRUTH TABLE

IN1A IN1B IN2A IN2B OUT1 OUT2

0	0	0	0	-V	-V
1	0	1	0	+V	+V
0	1	0	1	+V	+V
1	1	1	1	-V	-V

ELECTRICAL SPECIFICATIONS

Vpos +5V, Vneg -10V, TEMP 25C, PRR 25KHz

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
ABSOLUTE MAXIMUMS						
Vpos	Supply Voltage Positive				6.5	V
Vneg	Supply Voltage Negative		-12			V
ENVIRONMENTAL						
To	Operating Temperature		-55		+125	Deg C
Ts	Storage Temperature		-55		150	Deg C
INPUT						
VI_hi	Voltage Input High	TTL	2.5	3.5	5.0	V
VI_low	Voltage Input Low	TTL	0	.8	1.8	V
OUTPUT						
VO_hi	Voltage Out High	open load	4.0	4.3	4.9	V
VO_low	Voltage Out Low	open load -V	-10.0	-9.3	-9.9	V
IO_hi	Current Out High	steady state into 1V diode load +/-5V		25		mA
IO_low	Current Out Low	steady state into 1V diode load +/-5V		25		mA
lopk	Current Peak Output	sink and source	+/-300			mA
SUPPLY						
IQC_pos	Quiescent Current Positive			10		mA
IQC_neg	Quiescent Current Negative			-5		mA
DYNAMIC						
TSW_rise	Switching Speed On	opposed 1N4148 diode load		15	22	nS
TSW_fall	Switching Speed Off	opposed 1N4148 diode load		15	22	nS
PRR	Pulse Repetition Rate	Max, 10pF load		10	25	MHz

ESD Sensitivity HBM Class1B

MECHANICAL SPECIFICATIONS

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

Package Code 3

Leadform: Q3569

Type: Housing; Lead Finish: Gold

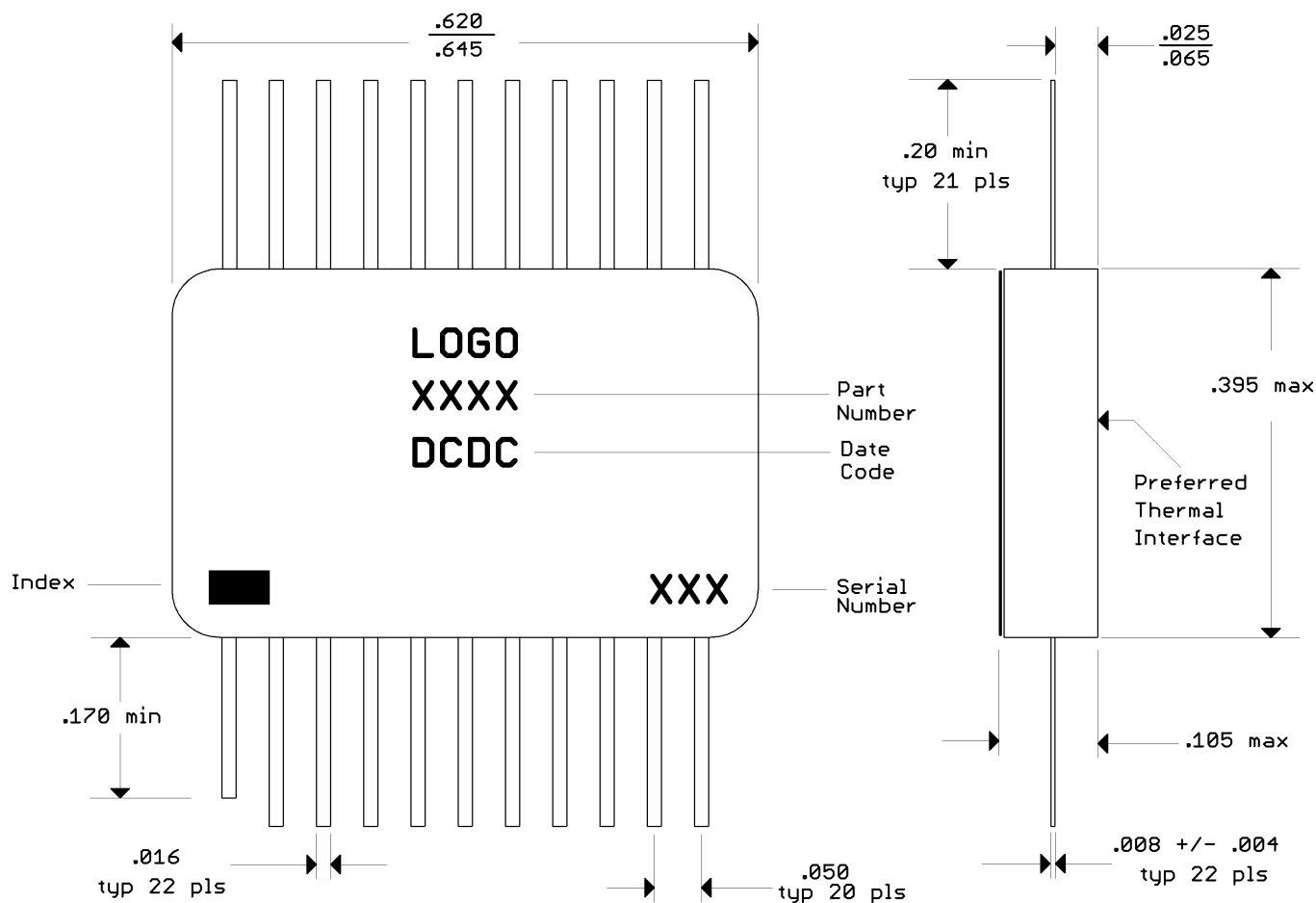
Length .645 in MAX; Width .395 in MAX; Height .125 in MAX

MARKING SPECIFICATIONS

Logo: IMPELLIMAX

Part Number: 9209

Date Code: YYWW



WAVEFORM

120kHz PRR at 20% Duty Cycle

