Monzite Corporation
603-886-9569

Dual +15V/-48V PIN Diode Switch Driver

DATASHEET
9720

GENERAL DESCRIPTION

The 9720 is a driver featuring high speed suited for driving high speed high power PIN diode switches.

1) Input level is low from 0 to 2V, and logic high corresponds to an 8 to 15V input voltage. Low to hi transition occurs from 5 to 7.5V, and hi-to low transition occurs at <7.5V. Inputs are pulled up to +12V nominal by 1K minimum impedance. Output A is inverting and Output B is noninverting.

2) Positive (Output A) current is 66 mA nominal into +.815V loads and (Output B) current is 70 mA nominal into +.87V load. Negative outputs are capable of sinking 10 mA.

3) The Status output reports the operational status of the driver. It is a bilevel discrete signal with the following characteristics:

Operational Status: Ground capable of sinking 100 mA inductive.

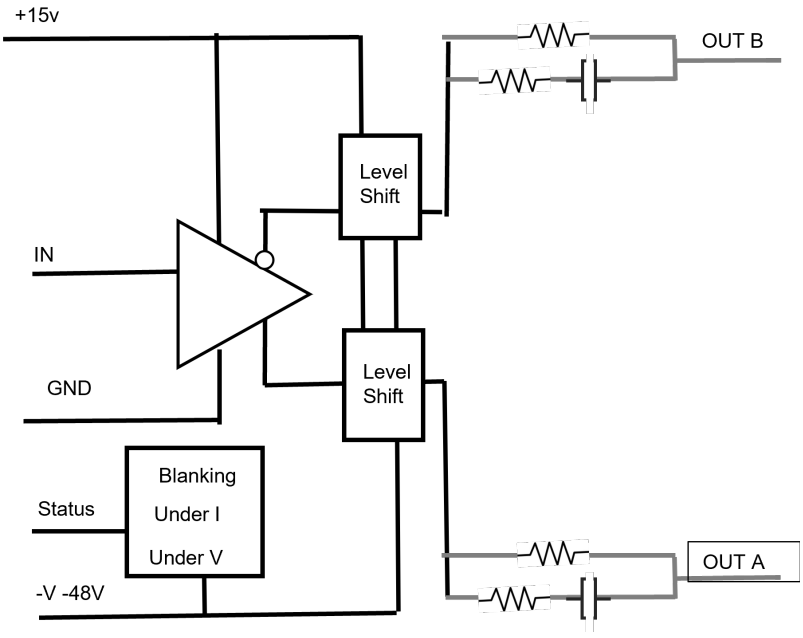
Fault Status: Open Circuit <75K ohms

Fault Conditions: If positive current is less than 30% of nominal currents for A and B

If negative voltage is less negative than -30V, or not present.

Fault Blanking: Fault Status report shall be blanked by 2 microseconds nominal delay following control switching.

FUNCTION BLOCK DIAGRAM

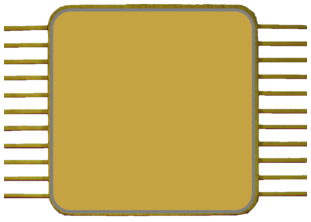


MECHANICAL

The 9720 is sealed in a glass to metal .625" x .625" package.

ECCN Code EAR99

9720 is RoHS 3 (EU 2015/863) compliant.



PIN CONNECTIONS

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

1	+V
2	Input Control
3	NC
4	NC
5	NC
6	Ground
7	Ground
8	Ground
9	Status
10	NC
11	-48V
12	NC
13	Output A
14	NC
15	NC
16	NC
17	NC
18	NC
19	NC
20	NC
21	Output B
22	NC

TRUTH TABLE

IN-	OUT A	OUT B
0	+V	-V
1	-V	+V

ELECTRICAL SPECIFICATIONS

Vpos +15V, Vneg -48V, TEMP 25C, PRR 25KHz

	SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
ABSOLUTE MAXIMUMS							
	Vpos	Supply Voltage Positive				16.5	V
	Vneg	Supply Voltage Negative		-75			V
ENVIRONMENTAL							
	To	Operating Temperature		-55		+125	Deg C
	Ts	Storage Temperature		-55		150	Deg C
INPUT							
	VI_hi	Voltage Input High			5	10	V
	VI_low	Voltage Input Low		-10	.4		V
OUTPUT							
	VO_hi	Voltage Out High	open load	14.0	14.3	14.9	V
	VO_low	Voltage Out Low	open load -V	-47.0	-47.3	-48	V
	IO_hi	Current Out High	forward bias PIN diode		70		mA
	IO_low	Current Out Low	PIN diode load back bias		-10		mA
	Iopk	Current Peak Output	sink and source		100		mA
SUPPLY							
	IQC_pos	Quiescent Current Positive				95	mA
	IQC_neg	Quiescent Current Negative			-5		mA
DYNAMIC							
	TSW_rise	Switching Speed On	1N4148 diode load		200		nS
	TSW_fall	Switching Speed Off	1N4148 diode load		200		nS
	PRR	Pulse Repetition Rate	Max, 10pF load		10		KHz

ESD Sensitivity HBM Class1B

MECHANICAL SPECIFICATIONS

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

Package Code 5
Type: Housing; Lead Finish: Gold
Length .645 in MAX; Width .645 in MAX; Height .135 in MAX

MARKING SPECIFICATIONS

Logo: IMPELLIMAX
Part Number: 9720
Date Code: YYWW