

## 8 PIN DIP TYPE | PS7122-2B OPTO-COUPLED SOLID STATE RELAY | PS7122L-2B

### FEATURES

- CONTAINS NORMALLY CLOSE OUTPUT (MOSFET)
- DESIGNED FOR AC/DC SWITCHING LINE CHANGER
- DUAL CHANNEL 8 PIN DIP PACKAGE

### DESCRIPTION

PS7122-2B and PS7122L-2B are solid state relays containing a GaAs LED on the light emitting side (input side) and MOSFETs on the output side. They are suitable for analog signal control because of their low offset and high linearity.

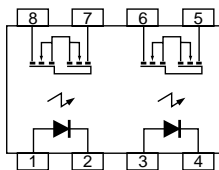
### APPLICATIONS

- VOICE TELEPHONY
- X-CHANGER
- PBX

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C)

PART NUMBER			PS7122-2B, PS7122L-2B		
SYMBOLS	PARAMETERS	UNITS	MIN	TYP	MAX
Diode	V <sub>F</sub>	Forward Voltage, I <sub>F</sub> = 10 mA		1.2	1.5
	I <sub>R</sub>	Reverse Current, V <sub>R</sub> = 5 V		μA	0 5
MOS FET	R <sub>ON</sub>	On-stage Resistance, I <sub>L</sub> = 10 mA	Ω	6	8
	I <sub>L</sub> OFF	Off-stage Leak Current, I <sub>F</sub> = 10 mA, V <sub>L</sub> = 250 V	μA	0.03	1
Coupler	t <sub>ON</sub>	Turn-on Time I <sub>F</sub> = 10 mA V <sub>L</sub> = 5 V	ms	0.03	0.2
	t <sub>OFF</sub>	Turn-off Time R <sub>L</sub> = 0.5 kΩ	ms	0.40	1.5
	R <sub>I-O</sub>	Isolation Resistance, V <sub>I-O</sub> = 1.0 kV	Ω	10 <sup>9</sup>	
	C <sub>I-O</sub>	Isolation Capacitance, V = 0 V, f = 1 MHz	pF/ch		1.1

PS7122-2B, PS7122L-2B



# PS7122-2B, PS7122L-2B

## ABSOLUTE MAXIMUM RATINGS<sup>1</sup> (T<sub>A</sub> = 25°C)

SYMBOLS	PARAMETERS	UNITS	RATINGS	
			PS7122-2B	PS7122L-2B
Diode				
I <sub>F</sub>	Forward Current (DC)	mA	50	50
V <sub>R</sub>	Reverse Voltage	V	5	5
P <sub>D</sub>	Power Dissipation	mW/ch	50	50
I <sub>FP</sub>	Peak Forward Current (P <sub>W</sub> = 100 μs, Duty Cycle = 1%)	A	1	1
MOSFET				
V <sub>BOU</sub> T	Break Down Voltage	V	250	250
I <sub>L</sub>	Continuous Load Current	mA	200	200
P <sub>OU</sub> T	Power Dissipation	mW/ch	375	375
Coupled				
BV	Isolation Voltage <sup>2</sup>	V	1500	1500
P <sub>T</sub>	Total Power Dissipation	mW	850	850
T <sub>OP</sub>	Operating Temperature	°C	-40 to 80	-40 to 80
T <sub>STG</sub>	Storage Temperature	°C	-40 to 100	-40 to 100

### Notes:

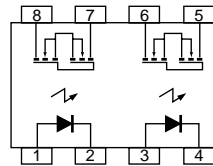
1. Operation in excess of any one of these parameters may result in permanent damage.
2. AC voltage for 1 minute at T<sub>A</sub> = 25 °C, RH = 60 % between input and output.

## RECOMMENDED OPERATING CONDITIONS (T<sub>A</sub> = 25°C)

PART NUMBER		PS7122-2B, PS7122L-2B			
SYMBOLS	PARAMETERS	UNITS	MIN	TYP	MAX
I <sub>F</sub>	LED Operating Current	mA	2	10	20
V <sub>F</sub>	LED Off Voltage	V	0		0.5

## PIN CONNECTION (Top View)

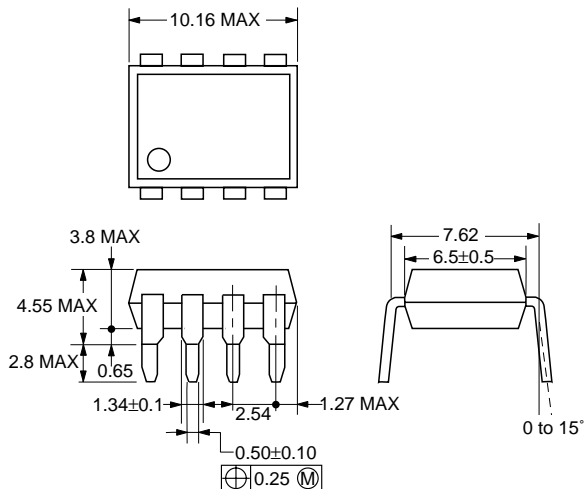
### PS7122-2B, PS7122L-2B



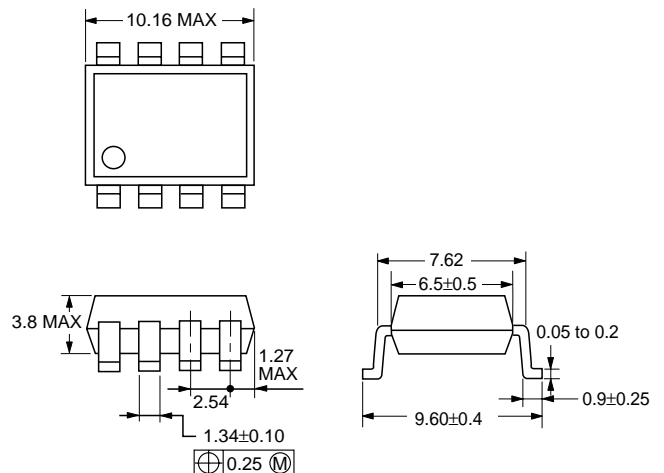
1. LED Anode
2. LED Cathode
3. LED Anode
4. LED Cathode
5. MOSFET (N.C.)
6. MOSFET (N.C.)
7. MOSFET (N.C.)
8. MOSFET (N.C.)

## OUTLINE DIMENSIONS (Units in mm)

### PS7122-2B



### PS7122L-2B



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