

**8-PIN SOP OCMOS FET
(2-ch OCMOS FET)****DESCRIPTION**

The PS7221A-2A is a solid state relay containing GaAs LEDs on the light emitting side (input side) and MOS FETs on the output side.

It is suitable for analog signal control because of its low offset and high linearity.

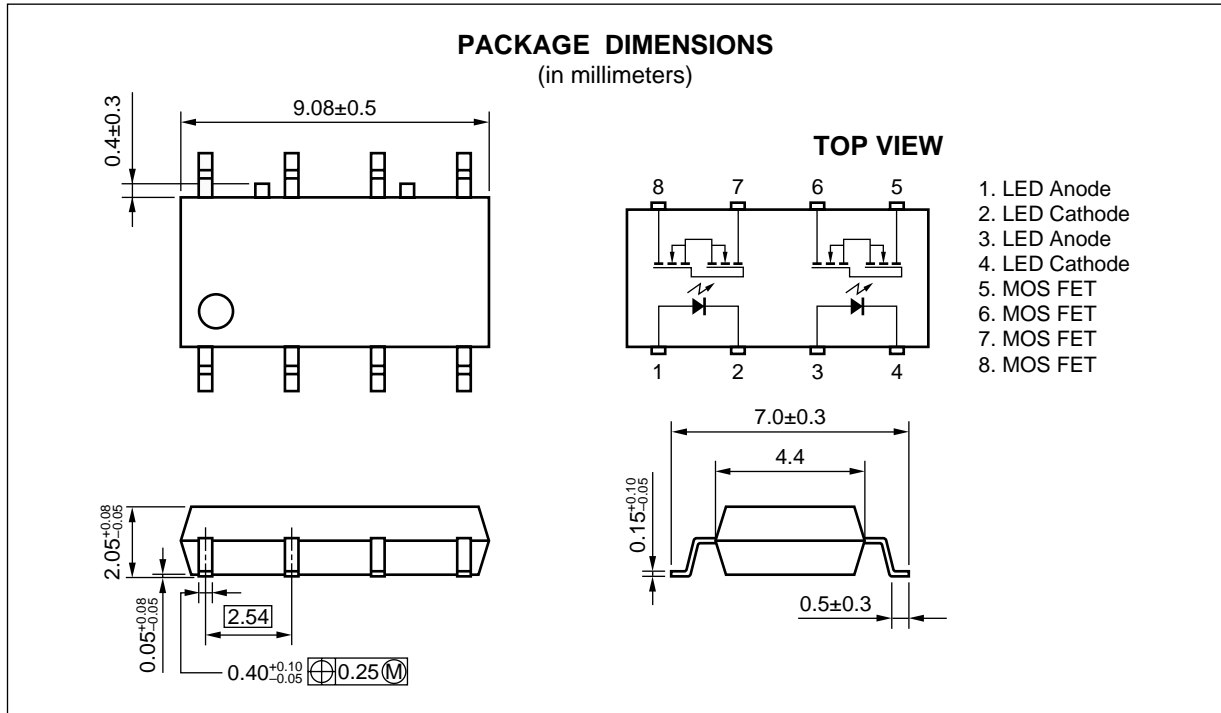
FEATURES

- 2 channel type (1 a + 1 a output)
- Low LED operating current ($I_f = 1 \text{ mA}$)
- Designed for AC/DC switching line changer
- Small package (8-pin SOP, Height = 2.1 mm)
- Low offset voltage
- Ordering number of taping product: PS7221A-2A-F3, F4

APPLICATIONS

- Exchange equipment
- Measurement equipment
- FA/OA equipment

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Not all devices/types available in every country. Please check with local NEC representative for availability and additional information.



ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C, unless otherwise specified)

Parameter		Symbol	Ratings	Unit
Diode	Forward Current (DC)	I _F	50	mA
	Reverse Voltage	V _R	5.0	V
	Power Dissipation	P _D	50	mW/ch
	Peak Forward Current ^{*1}	I _{FP}	1	A
MOS FET	Break Down Voltage	V _L	260	V
	Continuous Load Current	I _L	170	mA
	Pulse Load Current ^{*2} (AC/DC Connection)	I _{LP}	300	mA
	Power Dissipation	P _D	180	mW/ch
Isolation Voltage ^{*3}		BV	1 500	Vr.m.s.
Total Power Dissipation		P _T	460	mW
Operating Ambient Temperature		T _A	-40 to +80	°C
Storage Temperature		T _{stg}	-40 to +100	°C

*1 PW = 100 μs, Duty Cycle = 1 %

*2 PW = 100 ms, 1 shot

*3 AC voltage for 1 minute at T_A = 25 °C, RH = 60 % between input and output

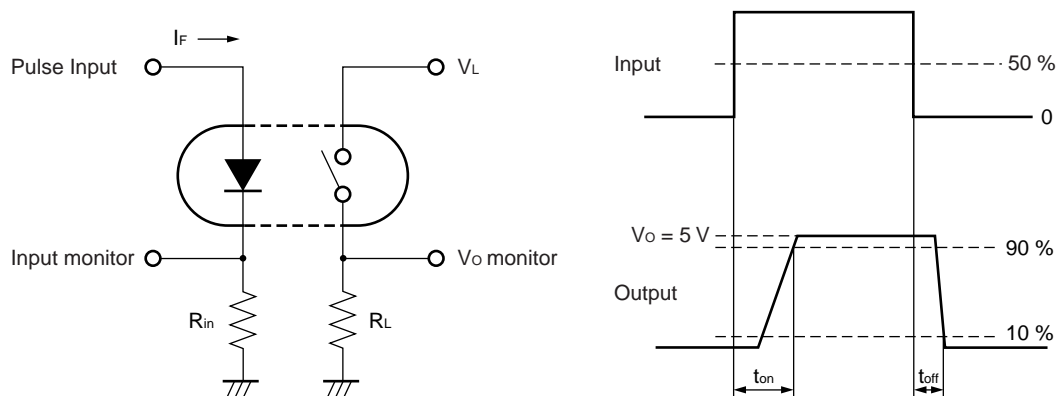
RECOMMENDED OPERATING CONDITIONS (T_A = 25 °C)

Parameter	Symbol	MIN.	TYP.	MAX.	Unit
LED Operating Current	I _F	1	5	20	mA
LED Off Voltage	V _F	0		0.5	V

ELECTRICAL CHARACTERISTICS (T_A = 25 °C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Diode	Forward Voltage	V _F	I _F = 5 mA		1.1	1.4	V
	Reverse Current	I _R	V _R = 5 V			5.0	μA
MOS FET	Off-state Leakage Current	I _{Loff}	V _D = 260 V		0.03	1.0	μA
Coupled	LED On-state Current	I _{Fon}	I _L = 170 mA			1.0	mA
	On-state Resistance	R _{on}	I _F = 5 mA, I _L = 10 mA		5.5	10	Ω
	Turn-on Time ^{*1}	t _{on}	I _F = 5 mA, V _O = 5 V, PW ≥ 10 ms		0.5	1.0	ms
	Turn-off Time ^{*1}	t _{off}			0.03	0.2	
	Isolation Resistance	R _{I-O}	V _{I-O} = 1.0 kV _{DC}		10 ⁹		Ω
	Isolation Capacitance	C _{I-O}	V = 0 V, f = 1 MHz			0.4	pF/ch

*1 Turn-on, Turn-off time



[MEMO]

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CAUTION

Within this device there exists GaAs (Gallium Arsenide) material which is a harmful substance if ingested. Please do not under any circumstances break the hermetic seal.

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