

**4-PIN SOP 0.55 Ω LOW ON-STATE RESISTANCE
1-ch Optical Coupled MOS FET**

DESCRIPTION

The PS7206-1A is a low output capacitance solid state relay containing GaAs LEDs on the light emitting side (input side) and MOS FETs on the output side.

It is suitable for PLC, etc. because of its large continuous load current and low output resistance.

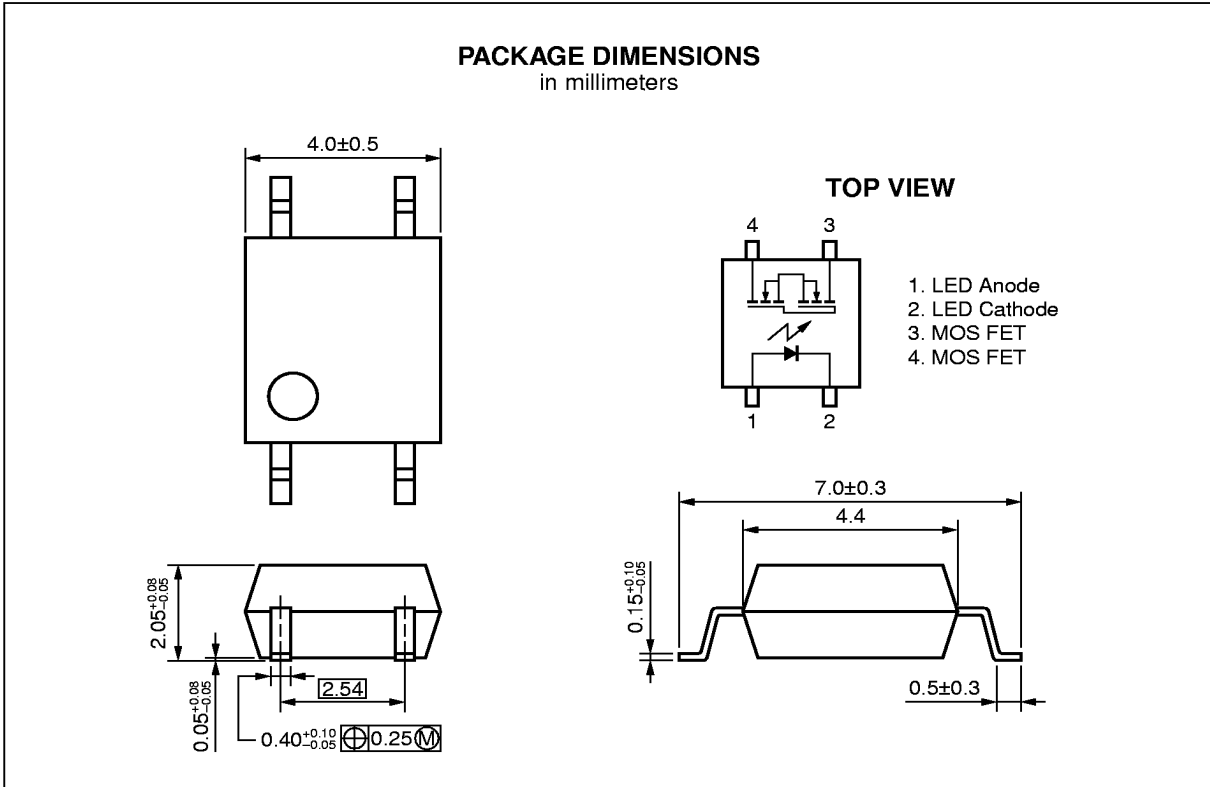
FEATURES

- Low on-state resistance ($R_{on} = 0.55 \Omega$ TYP.)
- Large continuous load current ($I_L = 600$ mA)
- 1 channel type (1 a output)
- Designed for AC/DC switching line changer
- Small and thin package (4-pin SOP, Height = 2.1 mm)
- High isolation voltage ($BV = 1\ 500$ Vr.m.s.)
- Low offset voltage
- Ordering number of taping product: PS7206-1A-E3, E4, F3, F4

APPLICATIONS

- Measurement 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
	Peak Forward Current ^{*1}	I _{FP}	1	A
MOS FET	Break Down Voltage	V _L	60	V
	Continuous Load Current	I _L	600	mA
	Pulse Load Current ^{*2} (AC/DC Connection)	I _{LP}	1.2	A
	Power Dissipation	P _D	300	mW
Isolation Voltage ^{*3}		BV	1 500	Vr.m.s.
Total Power Dissipation		P _T	350	mW
Operating Ambient Temperature		T _A	-40 to +85	°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	2	10	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 = 10 mA		1.2	1.4	V
	Reverse Current	I _R	V _R = 5 V			5.0	μA
MOS FET	Off-state Leakage Current	I _{Loff}	V _D = 60 V			1.0	μA
Coupled	LED On-state Current	I _{Fon}	I _L = 600 mA			2.0	mA
	On-state Resistance	R _{on1}	I _F = 10 mA, I _L = 10 mA		0.55	0.8	Ω
		R _{on2}	I _F = 10 mA, I _L = 600 mA				
	Turn-on Time	t _{on}	I _F = 10 mA, V _O = 5 V, PW ≥ 10 ms		0.65	2.0	ms
	Turn-off Time	t _{off}			0.08	0.2	
	Isolation Resistance	R _{i-o}	V _{i-o} = 1.0 kVdc	10 ⁹			Ω
Isolation Capacitance	C _{i-o}	V = 0 V, f = 1 MHz		0.5		pF	