

# PHOTO MOSFET SOLID STATE RELAYS

GENERAL PURPOSE **LOW CAPACITANCE** **HIGH CURRENT >1A** **HIGH VOLTAGE > 600V**

## DESCRIPTION

Standex Electronics features a full line of photo-MOSFET solid state relays in a variety of mounting styles and pin-outs for general purpose, low capacitance, high current, and high voltage configurations.

Our photo MOSFET relays are designed for highly reliable and long life fast switching (AC or DC) in a very small package, while ensuring low off-state leakage currents, and stable on resistance.

Mounting options include dual in-line (DIP) 4/6/8 pins, surface mount (SMD) 4/6/8 pins, or small-outline (SOP) 4/8 pins depending on the MOSFET series.

High voltage 600-1500V versions are available and ideally suited in Battery Management Systems for Electric Vehicles and Solar Inverters.

## FEATURES

- AC or DC switching in a very small package
- Fast switching, no contact bounce, low noise
- High peak load currents 3 to 6 Amps (47 and 36 series)
- Impervious to dirty environments, shock/vibration proof
- AEC-Q101 Automotive (47, 38, 40 series)
- Low off-state leakage current
- Extremely high input to output isolation
- Control low-level analog signals to high-level loads: (LED's, relays, lamps, solenoids)
- Stable on resistance
- Long life and high reliability



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OPERATING CHARACTERISTICS	GENERAL PURPOSE			LOW CAPACITANCE		HIGH CURRENT >1A		HIGH VOLTAGE > 600V	
	SMP-37 SERIES	SMP-31 SERIES	SMP-30 SERIES	SMP-21 SERIES	SMP-23 SERIES	SMP-36 SERIES	SMP-47 SERIES	SMP-38 SERIES	SMP-40 SERIES
Contact Form:	1A, 2A	1A, 2A	1A, 2A	1A, 2A	1A, 2A	1A	1A, 2A	1A, 2A	1A
Package Style/Pin Count:	DIP/4,6,8 SMD/4,6,8 SOP/4,8	DIP/4,6,8 SMD/4,6,8 SOP/4,8	DIP/4,6,8 SMD/4,6,8 SOP/4,8	SOP/4, 8	SOP/4, 8	DIP/6 SMD/6	DIP/4,6,8 SMD/4,6,8 SOP/4,8	DIP/4,6,8 SMD/4,6,8 SOP/4,8	DIP/6 SMD/6
Load Voltage (V):	60	350	400	40	250	60	80	600	1500
Load Current Max. (A):	0.55	0.13	0.12	0.25	0.17	2.5	1.5	0.08	0.045
Peak Load Current Max. (A):	2.0	0.6	0.6	0.75	0.42	6.0	3.0	0.2	0.18
Power Dissipation Max. (mW):	650	600	600	400	450	500	550	600	450
On Resistance Typ/Max. (Ω):	0.75/1.6	20/24	21/24	0.9/1.25	11/15	0.07/0.1	0.12/0.16	40/60	180/300
Output Capacitance (pF):	45	55	52	13	37	470	220	47	83
Off-State Leakage (μA):	1	1	1	10 nA	10nA	1	1	1	10
LED Operate Current Typ/Max. (mA):	0.9/3.0	0.8/3.0	0.7/3.0	0.3/3.0	0.6/3.0	1.5/3.0	0.5/3.0	1.0/3.0	0.9/5.0
Turn On Time Typ/Max. (mS):	0.25/1.0	0.25/1.0	0.2/1.0	0.07/0.5	0.15/0.5	0.6/3.0	0.7/3.0	0.1/1.0	0.3/1.0
Turn Off Time Typ/Max. (mS):	0.2/1.0	0.05/0.5	0.05/0.5	0.06/0.2	0.06/0.2	0.04/0.5	0.05/0.5	0.05/0.5	0.05/0.5
I/O Isolation Voltage Max. (V)	5000	3750	3750	1500	1500	3750	3750	3750	3750

## CERTIFICATIONS/APPROVALS

	SMP-37	SMP-31	SMP-30	SMP-21	SMP-23	SMP-36	SMP-47	SMP-38	SMP-40
RoHS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

## SERIES DATASHEET



## MARKETS

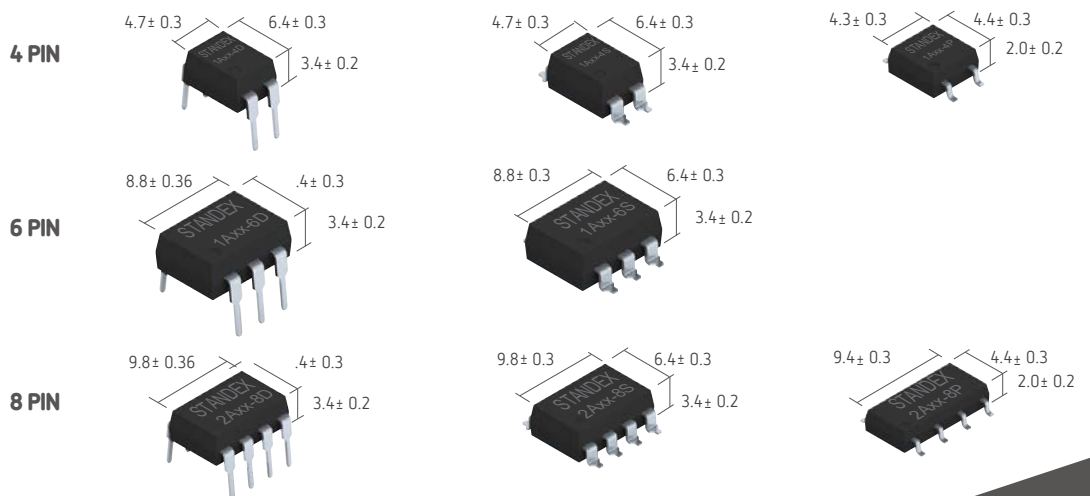
Automotive							X	X	X
Solar Battery Management								X	X
Electric Vehicles	X	X	X	X	X	X	X	X	X
Automated Test Equipment (ATE)	X	X	X	X	X	X	X	X	X
Sensing Equipment	X	X	X	X	X	X	X	X	X
I/O Modules	X	X	X	X	X	X	X	X	X
Telecomm/Security Equipment	X	X	X	X	X	X	X	X	X

## MECHANICAL/PACKAGING

### DIP (Dual In-Line)

### SMD (Surface Mount)

### SOP (Small Out-Line)



**Please note:** All technical specifications on this flyer refer to the standard product range. Modifications in the sense of technical progress are reserved. For general information only. For more specific information, please consult the product datasheet, available upon request.

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