

ASSR-3210, ASSR-3211, ASSR-3220

General-Purpose, Form A, Solid State Relay (Photo MOSFET) (250V/0.2A/10Ω)

Description

The Broadcom[®] ASSR-32xx Series consists of an AlGaAs infrared light-emitting diode (LED) input stage optically coupled to a high-voltage output detector circuit. The detector consists of a high-speed photovoltaic diode array and driver circuitry to switch on/off two discrete high voltage MOSFETs. The relay turns on (contact closes) with a minimum input current of 3 mA through the input LED. The relay turns off (contact opens) with an input voltage of 0.8V or less.

The single channel configurations, ASSR-3210 and ASSR-3211, are equivalent to 1 Form A Electromechanical Relays (EMR), and the dual channel configuration, ASSR-3220, is equivalent to 2 Form A EMR. They are available in 4-pin SO, 6-pin DIP, 8-pin DIP and Gull Wing Surface Mount for DIP packages. Their electrical and switching characteristics are specified over the temperature range of -40°C to +85°C. They are used for general purpose switching of signals and low power AC/DC loads.

ASSR-3211 enables AC/DC and DC-only output connections. For DC-only connection, the output current, I_o , increases to 0.4A and the on-resistance, $R(ON)$ reduces to 2.5Ω.

CAUTION! It is advised that normal static precautions be taken in handling and assembly of this component to prevent damage and/or degradation which may be induced by ESD.

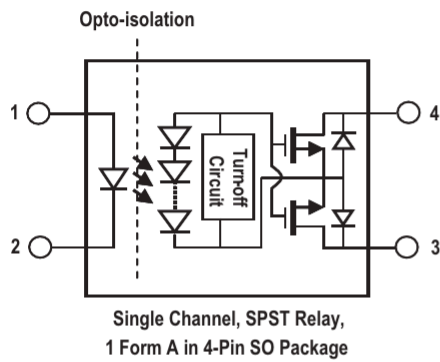
Features

- Compact solid-state bidirectional signal switch
- Single and dual channel normally-off Single-F Single-Throw (SPST) relay
- 250V output withstand voltage
- 0.2A or 0.4A current rating (See schematic for ASSR-3211 connections A and B.)
- Low input current: CMOS compatibility
- Low on-resistance:
 - 2Ω typical for DC-only
 - 8Ω typical for AC/DC
- High speed switching:
 - 0.25 ms (T_{ON}), 0.02 ms (T_{OFF}) typical
- High transient immunity: >1 kV/μs
- High input-to-output insulation voltage (safety regulatory approvals)
 - 3750 Vrms for 1 min per UL1577
 - CSA component acceptance

Applications

- Telecommunication switching
- Data communications
- Industrial controls
- Medical
- Security
- EMR/Reed Relay replacement

Functional Diagram



Truth Table

LED	Output
Off	Open
On	Close

Ordering Information

ASSR-32xx is UL Recognized with 3750 Vrms for 1 minute per UL1577 and is approved under CSA Component Approval Notice #5.

Part Number	Option	Package	Surface Mount	Gull Wing	Tape & Reel	Quantity
	RoHS Compliant					
ASSR-3210	-003E	SO-4	X			100 units per tube
	-503E		X		X	1500 units per tube
ASSR-3211	-001E	300-mil DIP-6				50 units per tube
	-301E		X	X		50 units per tube
	-501E		X	X	X	1000 units per tube
ASSR-3220	-002E	300-mil DIP-8				50 units per tube
	-302E		X	X		50 units per tube
	-502E		X	X	X	1000 units per tube

To order, choose a part number from the part number column and combine with the desired option from the option column to form an order entry.

Example 1:

ASSR-3211-501E to order product of 300-mil DIP-6 Gull Wing Surface Mount package in Tape and Reel packaging and RoHS Compliant.

Example 2:

ASSR-3220-002E to order product of 300-mil DIP-8 package in tube packaging and RoHS Compliant.

Option data sheets are available. Contact your Broadcom sales representative or authorized distributor for information.

