

ACSL-7210

Dual-Channel (Bi-Directional) 25MBd CMOS Buffered Input Digital Optocoupler



Product Brief



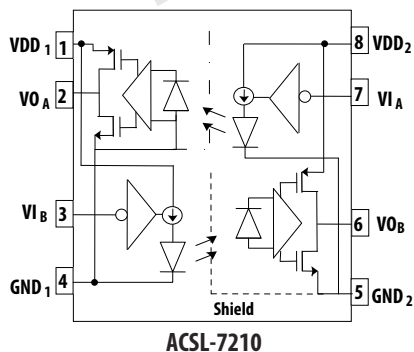
Description

Avago's ACSL-7210 buffered input dual-channel bi-directional digital optocoupler utilizes CMOS IC technology and patented packaging technologies to achieve high isolation voltage 3750 V_{RMS} in a <2mm low profile narrow-body SOIC-8 package. The device optimizes for bi-directional industrial communication networks such as Fieldbus (PROFIBUS) and Serial Peripheral Interface (SPI) applications.

The main building blocks of ACSL-7210 for each channel are a CMOS LED driver IC that controls by CMOS logic input signal, a high speed LED and a CMOS detector IC. These building blocks allow fast propagation delay of 40 ns and short pulse width distortion of 10 ns maximum.

The ACSL-7210 has common-mode noise immunity of 20 kV/μs at 1000 V_{CM}, with UL recognized with isolation voltage of 3750 V_{RMS} for 1 minute, and IEC/EN/DIN EN 60747-5-5 working insulation voltage V_{IORM} of 567 V_{PEAK} with reinforced insulation.

Functional Diagram



* A 0.1 μF bypass capacitor must be connected between pins V_{DD1} and GND₁, and V_{DD2} and GND₂

Features

- Dual-Channel (Opposite direction orientation)
- High Speed: DC to 25 MBd
- 3.3 V and 5 V CMOS Compatibility
- CMOS output and buffer input
- 20 kV/μs minimum Common Mode Rejection (CMR) at V_{CM} = 1000 V
- Guaranteed AC and DC performance over wide temperature: -40 °C to +105 °C
- Safety and Regulatory Approvals: (pending)
 - UL 1577 – 3750 V_{rms} for 1 minute
 - IEC/EN/DIN EN 60747-5-5 for Reinforced Insulation – 567 V_{PEAK}

Applications

- Digital Fieldbus Isolation: Profibus, CC-Link, DeviceNet, SDS
- Multiplexed Data Transmission
- General Instrument and Data Acquisition
- Computer Peripheral Interface
- Microprocessor System Interface

TRUTH TABLE (POSITIVE LOGIC)

Input side VDD state	Output side VDD state	VI	LED	VO
Power Supplied	Power Supplied	HIGH	OFF	HIGH
		LOW	ON	LOW
No Power	Power Supplied	X	OFF	HIGH

This preliminary data is provided to assist you in the evaluation of product(s) currently under development. Until Avago Technologies releases this product for general sales, Avago Technologies reserves the right to alter prices, specifications, features, capabilities, functions, release dates, and remove availability of the product(s) at anytime.

Ordering Information

ACSL-7210 is UL Recognized with 3750 VRMS for 1 minute per UL1577.

Part number	Option	Package	Surface Mount	Tape & Reel	IEC/EN/DIN EN	Quantity
	RoHS Compliant				60747-5-5	
ACSL-7210	-00RE	SO-8	X			100 per tube
	-06RE		X		X	100 per tube
	-50RE		X	X		1500 per reel
	-56RE		X	X	X	1500 per reel

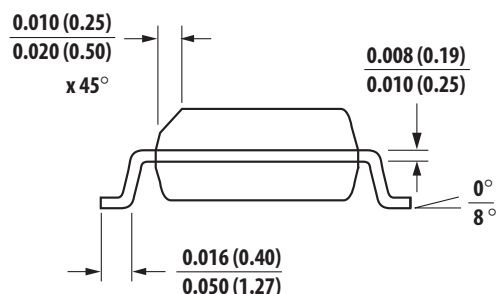
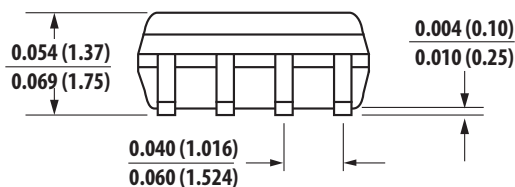
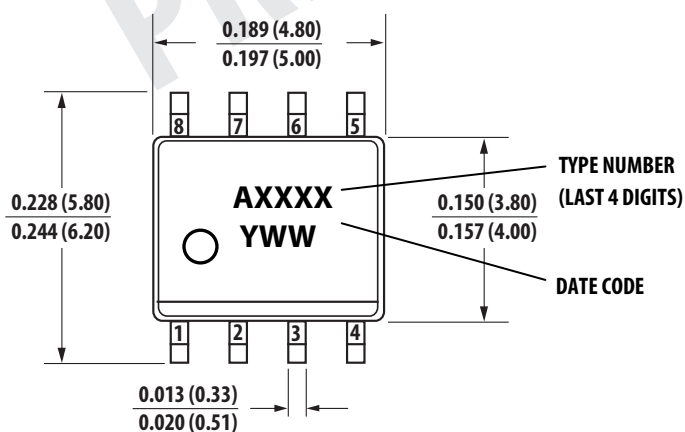
To order, choose a part number from the part number column and combine with the desired option from the option column to form an order entry.

Example 1: ACSL-7210-50RE to order RoHS compliant Surface Mount 8-pin package in Tape and Reel packaging.

Option datasheets are available. Contact your Avago sales representative or authorized distributor for information.

Package Outline Drawings

ACSL-7210 SO-8 Package



DIMENSIONS: INCHES (MILLIMETERS) $\frac{\text{MIN}}{\text{MAX}}$

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For product information and a complete list of distributors, please go to our web site: www.avagotech.com

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