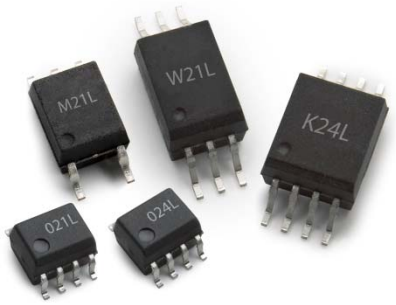
New Product Hot Sheet

Market Release: 7th May, 2012 (ACPL-M21L)

Part Number: ACPL-M21L-000E,
ACPL-021L-000E, ACPL-024L-000E,
ACPL-W21-000E, ACPL-K24L-000E

Description: Low Power 5MBd Digital Optocouplers



Target Markets & Applications:

- Industrial I/Os, Communications
- Microprocessors System Interface
- Power Control Systems
- Low Isolation of High Speed Logic Systems
- Ground Loop Eliminations

Value Statement:

The ACPL-M21L/021L/024L/W21L/K24L series of digital optocouplers consume low power, at maximum supply current of 1.1mA per channel and forward current as low as 1.6mA, thus allowing direct current drive by most microprocessors. Low supply voltage operation for supply scaling of FPGA and microcontrollers with CMOS output and optical receiver input stages including built-in Schmitt triggers provide logic-compatible waveforms, eliminating the need for additional waveshaping. A superior internal shield guarantees common mode transient immunity of 25 kV/µs at a common mode voltage of 1000 V over a temperature range of -40 °C to 105°C ensuring glitch free output upon power-up and power-down of the optocouplers. The stretched SO6/SO8 packages (ACPL-W21L/K54L) are up to 50% smaller than the conventional DIP package, facilitates smaller compact design. All the packages are compliant to industrial safety standards such as IEC/EN 60747-5-5, UL 1577 and CSA.

Key Features:

- Low Supply Current, I_{DD} < 1.1mA max
- Low LED Input Drive Current, I_F at 1.6mA min
- Low Supply Voltage range, 2.7 to 5.5V
- Hysteresis 0.2mA typical
- High CMR (min. 25kV/µs@V_{CM}=1kV)
- Stretched SO6/SO8 Packages
- Industrial Temperature Range: -40°C to 105°C
- Safety Approval UL, CSA and IEC/EN 60747-5-5

Part Number	Isolation Voltage (Vrms/min)	Working Voltage (Vpeak)
ACPL-M21L	3750	560
ACPL-021L	3750	560
ACPL-024L	3750	560
ACPL-W21L	5000	1140
ACPL-K24L	5000	1140

Competition Vs Avago:

Competitor	Part number(s)	Key Differentiators over Avago
Toshiba	TLP2405 / TLP2408 TLP2200 TLP558 / 555	Lower Supply Voltage, Lower Power consumption, Higher CMR
Vishay	SFH6720T / SFH6721T	
ADI / TI / SiLabs	ADuM12xx / ADuM3200 / ADuM3201 / ADuM3210 / ADuM3211 / Si8610BC-B-IS / Si8610EC-B-IS	IEC 60747-5-5 certified, Higher Isolation Voltage, Lower Power consumption

SWOT Analysis:

Strengths: The lowest power consumption 5MBd optocoupler in the industry, provide up to 80% power saving as compare to competitors.

Weaknesses: Do not have multi channels / bi-directional parts

Do not support high supply voltage up to 25V

Opportunities: Customers' using older generation parts like HCPL-02xx or HCPL-22xx in their existing design and would like to upgrade to improve the performance of their new design.

Potential proliferation for wide body package for higher isolation requirements

Threats: Competitors offer very competitive price to gain more market share

Design Registerable: Yes

Documentation and Sales Collateral:

ACPL-M21L Data Sheet: http://www.avagotech.com/docs/AV02-3462EN

ACPL-M21L Reliability Data: http://www.avagotech.com/docs/AV02-3454EN

Ordering/Packaging Information:

Please contact your Avago sales representative to obtain pricing information for the ACPL-M21L Low Power 5MBd Digital Optocoupler. Samples and production quantities are available now through the Avago direct sales channel and via worldwide distribution partners.

Background Information:

The ACPL-M21L/021L/024L/W21L/K54L series of components are upgrades from our existing HCPL-22xx and HCPL-02xx (5MBd) packages.