

Product Change Notice

Revised Date: 24 Jan 2018

Issue Date: 8 Jan 2018

Change Type:

Datasheet upgrade

Parts Affected:

ACPL-P345	ACPL-W345	ACPL-P346	ACPL-W346	QCPL-WB4A
ACPL-P347	ACPL-W347	ACPL-P349	ACPL-W349	ACPL-352J
ACML-7400	ACML-7410	ACML-7420		

All associated options will also be affected. See Appendix for full part number list.

Description and Extent of Change:

1. Upgrade Output Common Mode Transient Immunity, $|ICM_H|$ and $|CM_L|$ to 100kV/ μ s(min) at $V_{CM} = 1500V$ for

ACPL-P345	ACPL-W345	ACPL-P346	ACPL-W346	QCPL-WB4A
ACPL-P347	ACPL-W347	ACPL-P349	ACPL-W349	ACPL-352J

2. Upgrade Common Mode Transient Immunity, $|ICM_H|$ and $|CM_L|$ to 75kV/ μ s(min) at $V_{CM} = 1500V$ for

ACML-7400	ACML-7410	ACML-7420
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Current Specifications

Part Number	Parameter	Symbol	Min.	Typ.	Max.	Units	Test Conditions
ACPL-P345, ACPL-W345, ACPL-P346, ACPL-W346, QCPL-WB4A	Output High Level Common Mode Transient Immunity	$ ICM_H $	50	70		kV/ μ s	$T_A = 25^\circ C$, $V_{CM} = 1500 V$, $I_F = 9 mA$, $V_{CC} = 20 V$, with split resistors
ACPL-P345, ACPL-W345, ACPL-P346, ACPL-W346, QCPL-WB4A	Output Low Level Common Mode Transient Immunity	$ CM_L $	50	70		kV/ μ s	$T_A = 25^\circ C$, $V_{CM} = 1500 V$, $V_F = 0 V$, $V_{CC} = 20 V$, with split resistors
ACPL-P347, ACPL-W347, ACPL-P349, ACPL-W349	Output High Level Common Mode Transient Immunity	$ ICM_H $	50	70		kV/ μ s	$T_A = 25^\circ C$, $V_{CM} = 1500 V$, $I_F = 9 mA$, $V_{CC} = 30 V$, with split resistors
ACPL-P347, ACPL-W347, ACPL-P349, ACPL-W349	Output Low Level Common Mode Transient Immunity	$ CM_L $	50	70		kV/ μ s	$T_A = 25^\circ C$, $V_{CM} = 1500 V$, $V_F = 0 V$, $V_{CC} = 30 V$, with split resistors
ACPL-352J	Output High Level Common Mode Transient Immunity	$ ICM_H $	50			kV/ μ s	$T_A = 25^\circ C$, $V_{CM} = 2000 V$, $I_F = 8 mA$, $V_{DD1} = 5 V$, $C_F = 330 pF$, $R_F = 10 k\Omega$

ACPL-352J	Output Low Level Common Mode Transient Immunity	$ CM_L $	50			kV/ μ s	$T_A = 25^\circ\text{C}$, $V_{CM} = 2000\text{ V}$, $V_F = 0\text{ V}$, $V_{DD1} = 5\text{ V}$, $C_F = 330\text{ pF}$, $R_F = 10\text{ k}\Omega$
ACML-7400, ACML-7410, ACML-7420	Common Mode Transient Immunity at Logic High Output	$ICM_H $	25	>40		kV/ μ s	$V_{CM} = 1000\text{ V}$, $T_A = 25^\circ\text{ C}$, $V_{IN} = V_{DD}$, $V_O > 0.8 \times V_{DD}$
ACML-7400, ACML-7410, ACML-7420	Common Mode Transient Immunity at Logic Low Output	$ CM_L $	25	>40		kV/ μ s	$V_{CM} = 1000\text{ V}$, $T_A = 25^\circ\text{ C}$, $V_{IN} = 0\text{ V}$, $V_O < 0.8\text{ V}$

New Specifications

Part Number	Parameter	Symbol	Min.	Typ.	Max.	Units	Test Conditions
ACPL-P345, ACPL-W345, ACPL-P346, ACPL-W346, QCPL-WB4A	Output High Level Common Mode Transient Immunity	$ICM_H $	100			kV/ μ s	$T_A = 25^\circ\text{C}$, $V_{CM} = 1500\text{ V}$, $I_F = 9\text{ mA}$, $V_{CC} = 20\text{ V}$, with split resistors
ACPL-P345, ACPL-W345, ACPL-P346, ACPL-W346, QCPL-WB4A	Output Low Level Common Mode Transient Immunity	$ CM_L $	100			kV/ μ s	$T_A = 25^\circ\text{C}$, $V_{CM} = 1500\text{ V}$, $V_F = 0\text{ V}$, $V_{CC} = 20\text{ V}$, with split resistors
ACPL-P347, ACPL-W347, ACPL-P349, ACPL-W349	Output High Level Common Mode Transient Immunity	$ICM_H $	100			kV/ μ s	$T_A = 25^\circ\text{C}$, $V_{CM} = 1500\text{ V}$, $I_F = 9\text{ mA}$, $V_{CC} = 30\text{ V}$, with split resistors
ACPL-P347, ACPL-W347, ACPL-P349, ACPL-W349	Output Low Level Common Mode Transient Immunity	$ CM_L $	100			kV/ μ s	$T_A = 25^\circ\text{C}$, $V_{CM} = 1500\text{ V}$, $V_F = 0\text{ V}$, $V_{CC} = 30\text{ V}$, with split resistors
ACPL-352J	Output High Level Common Mode Transient Immunity	$ICM_H $	100			kV/ μ s	$T_A = 25^\circ\text{C}$, $V_{CM} = 1500\text{ V}$, $I_F = 8\text{ mA}$, $V_{DD1} = 5\text{ V}$, $C_F = 330\text{ pF}$, $R_F = 10\text{ k}\Omega$
ACPL-352J	Output Low Level Common Mode Transient Immunity	$ CM_L $	100			kV/ μ s	$T_A = 25^\circ\text{C}$, $V_{CM} = 1500\text{ V}$, $V_F = 0\text{ V}$, $V_{DD1} = 5\text{ V}$, $C_F = 330\text{ pF}$, $R_F = 10\text{ k}\Omega$
ACML-7400, ACML-7410, ACML-7420	Common Mode Transient Immunity at Logic High Output	$ICM_H $	75			kV/ μ s	$V_{CM} = 1500\text{ V}$, $T_A = 25^\circ\text{ C}$, $V_{IN} = V_{DD}$, $V_O > 0.8 \times V_{DD}$
ACML-7400, ACML-7410, ACML-7420	Common Mode Transient Immunity at Logic Low Output	$ CM_L $	75			kV/ μ s	$V_{CM} = 1500\text{ V}$, $T_A = 25^\circ\text{ C}$, $V_{IN} = 0\text{ V}$, $V_O < 0.8\text{ V}$

Reasons for Change:

Better laboratory testing equipment enable manufacturing to guarantee a higher common mode rejection (CMR) transient immunity, reflecting the device's true electrical performance.

Effect of Change on Fit, Form, Function, Quality, or Reliability:

No change in fit, form and function. No change requires in customer's existing application. All other remaining electrical specifications in datasheet and physical characteristics have not been changed.

Effective Date of Change:

Implementation of the change and update of the datasheets will be effective from the issue date of this product change notice.

Qualification Data:

Data has been generated and approved.

These changes have been reviewed and approved by Broadcom Limited engineers and managers per Broadcom Limited procedure: Change Control and Customer Notification, 5962-6052-80.

Please contact your Broadcom Limited field sales for any questions or support requirements. Please return any response as soon as possible, but not to exceed 30 days.

Appendix:

Affected Part Number	
ACPL-P345-000E	QCPL-WB4A-560ME
ACPL-P345-060E	ACPL-352J-500E
ACPL-P345-500E	ACPL-352J-000E
ACPL-P346-000E	ACML-7400-000E
ACPL-P346-060E	ACML-7400-500E
ACPL-P346-500E	ACML-7410-000E
ACPL-P346-500ME	ACML-7410-500E
ACPL-P346-560E	ACML-7420-000E
ACPL-P347-000E	ACML-7420-500E
ACPL-P347-060E	
ACPL-P349-000E	
ACPL-P349-060E	
ACPL-P349-500E	
ACPL-P349-560E	
ACPL-W345-000E	
ACPL-W345-060E	
ACPL-W345-500E	
ACPL-W345-560E	
ACPL-W346-000E	
ACPL-W346-060E	
ACPL-W346-500E	
ACPL-W346-560E	
ACPL-W347-000E	
ACPL-W347-060E	
ACPL-W347-500E	
ACPL-W347-560E	
ACPL-W349-000E	
ACPL-W349-060E	
ACPL-W349-500E	
ACPL-W349-560E	