

# Analog IP Cell

## Rail-to-Rail Output OPV

### OPV12RR XC06

#### General Description

The OPV12RR XC06 analogue IP cell is an operational amplifier with Rail-to-Rail Output, designed to be used as general purpose signal processing element in an ASIC. The Supply Voltage and the max input voltage is 12V. The amplifier can drive up to 10nF and 1kΩ load. The amplifier is unity gain stable and is designed to drive of chip loads.

#### Ratings, Parameters and Conditions

Parameter / Condition	Symbol	Min	Typ.	Max	Unit	Comment
<b>Electrical Parameters:</b>						
Supply Voltage	$V_{dd}$	5	12	15	V	
Disable Supply Current	$I_{dd}$	10		15	$\mu$ A	
Active Supply Current	$I_{dd}$		1.2	1.4	mA	
Open Loop DC Gain	$G_{DC}$	60	65	80	dB	
Phase Margin	PM		82		°	
Gain Bandwidth	GBW		1.2		MHz	
Common Mode Output Range	$V_{CM}$	0		$V_{dd}$		
Common Mode Input Range	$V_I$	0		$V_{dd} - 2$	V	
<b>Absolute Maximum Ratings:</b>						
Operating Temperature	$T_{range}$	-40		140	°C	
Supply Voltage	$V_{dd}$	-0.3		18	V	
Input Voltage	$V_{in}$	-0.3		$V_{dd}+0.7$		
Output Voltage	$V_{out}$	-0.3		$V_{dd}+0.7$		
<b>Operating Conditions:</b>						
Ambient Temperature	$T_{amb}$	-20	27	80	°C	

#### IO-Description

Interface	I/O	Function	Comment
VSS	input	Supply	
VDD	Input	Supply	
VBN	Input	Bias	
VBP	Input	Bias	
INP	Input	Amplifier Positive Input	
INN	Input	Amplifier Negative Input	
OUT	Output	Amplifier Output	

#### Block schematic, ext. component diagram

