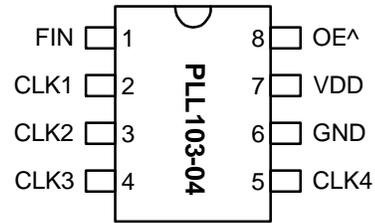


1-to-4 Clock Distribution Buffer

FEATURES

- 4 outputs identical to FIN.
- Low skew (< 250 ps between outputs).
- Input / Output frequency range 0 ~ 160 MHz
- 25mA drive capability at TTL levels.
- 70mA drive capability at CMOS levels.
- Output enable mode available to tri-state all outputs.
- 3.3V operation.
- Available in 8-Pin 150mil SOIC.

PIN CONFIGURATION



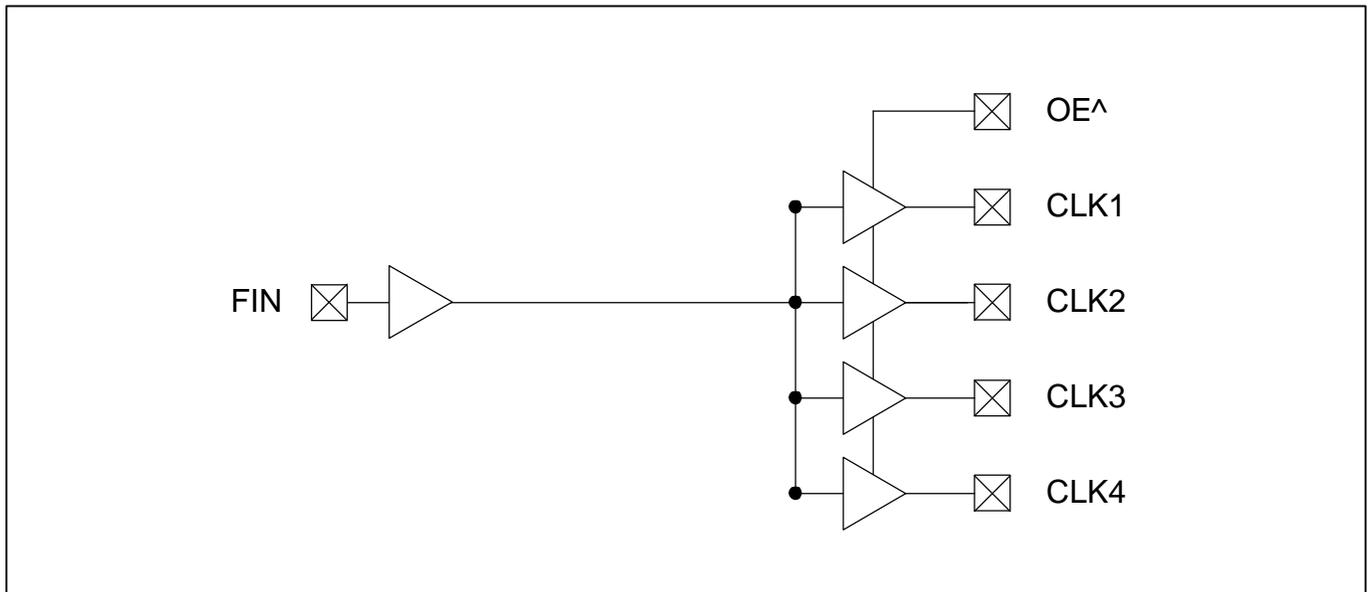
FIN = 0 ~ 160 Mhz

Note: ^: Internal pull-up (30kΩ)

DESCRIPTIONS

The PLL103-04 is a 1-to-4 Clock Distribution Buffer, reproducing the reference input frequency (FIN) at 4 different outputs. It is designed to minimize skew between outputs and provides TTL and CMOS compatible output levels. An output enable selector is available to tri-state all outputs.

BLOCK DIAGRAM



1-to-4 Clock Distribution Buffer**PIN DESCRIPTIONS**

Name	Number	Type	Description
FIN	1	I	Input Clock Frequency (FIN range 0 ~ 160MHz).
CLK1	2	O	Buffered Clock Output.
CLK2	3	O	Buffered Clock Output.
CLK3	4	O	Buffered Clock Output.
CLK4	5	O	Buffered Clock Output.
GND	6	P	Ground.
VDD	7	P	3.3V Power Supply.
OE	8	I	Output Enable. Tri-states all outputs if low. Internal pull-up resistor of 30 k Ω

1-to-4 Clock Distribution Buffer

ELECTRICAL SPECIFICATIONS

1. Absolute Maximum Ratings

PARAMETERS	SYMBOL	MIN.	MAX.	UNITS
Supply Voltage Range	V _{CC}	-0.5	7	V
Input Voltage Range	V _I	-0.5	V _{CC} +0.5	V
Output Voltage Range	V _O	-0.5	V _{CC} +0.5	V
Soldering Temperature			260	°C
Storage Temperature	T _S	-65	150	°C
Ambient Operating Temperature		0	70	°C
ESD Voltage			2	kV

Exposure of the device under conditions beyond the limits specified by Maximum Ratings for extended periods may cause permanent damage to the device and affect product reliability. These conditions represent a stress rating only, and functional operations of the device at these or any other conditions above the operational limits noted in this specification is not implied.

2. Electrical Characteristics

V_{DD} = 3.0~3.6V, unless otherwise stated

PARAMETERS	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Input Low Voltage	V _{IL}				0.8	V
Input High Voltage	V _{IH}		2.0			V
Input Low Current	I _{IL}	V _{IN} = 0V		19	50.0	μA
Input High Current	I _{IH}	V _{IN} = V _{DD}		0.10	100.0	μA
Output Low Current	I _{OL}	V _{OL} = 1.5 V		50		mA
Output High Current	I _{OH}	V _{OH} = 1.5 V		50		mA
Power Down Supply Current	I _{DD}	REF = 0MHz		0.3	50.0	μA
Supply Current	I _{DD}	Unloaded outputs at 75MHz, SEL inputs at V _{DD} or GND		30.0	40.0	mA

3. TIMING CHARACTERISTICS

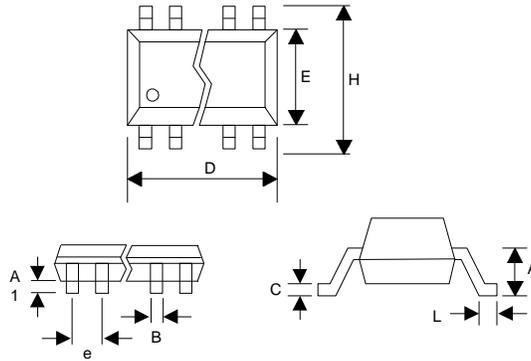
PARAMETERS	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Rise Time	T _r	Measured at 0.8V ~ 2.0V @ 3.3V	0.8	0.95	1.1	ns
Fall Time	T _f	Measured at 2.0V ~ 0.8V @ 3.3V	0.78	0.85	0.9	ns
Propagation	T _{PROP}	V _T = 1.5 V	1	4	6	ns
Output Duty Cycle	D _T		45	50	55	%
Output-to-Output skew	T _{skew}	Rising edges at V _{DD} /2			250	ps

1-to-4 Clock Distribution Buffer

PACKAGE INFORMATION

8 PIN Narrow SOIC (mm)

Symbol	SOIC	
	Min.	Max.
A	1.55	1.73
A1	0.15	0.18
B	0.35	0.49
C	0.19	0.25
D	4.80	4.98
E	3.81	3.99
H	5.84	6.20
L	0.41	0.89
e	1.27 BSC	



ORDERING INFORMATION

For part ordering, please contact our Sales Department:

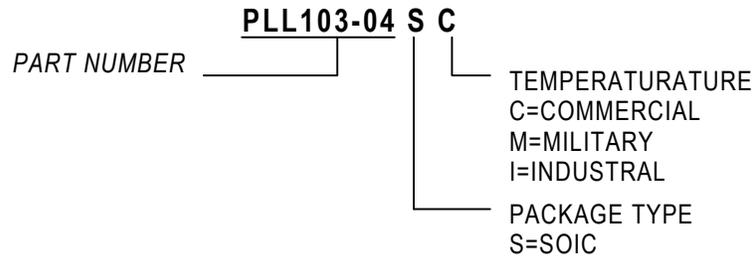
47745 Fremont Blvd., Fremont, CA 94538, USA

Tel: (510) 492-0990 Fax: (510) 492-0991

PART NUMBER

The order number for this device is a combination of the following:

Device number, Package type and Operating temperature range



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