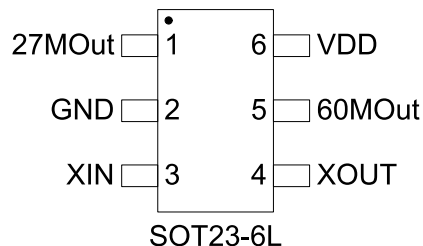


Application Specific Quick Turn Clock™
For use with Sigma Designs SMP8644/42 and SMP8654/52

FEATURES

- Advanced Low Jitter PLL design
- Accepts a 27MHz Fundamental Crystal input
- Two LVCMOS Clock Outputs
 - o 27MHz
 - o 60MHz
- Single 3.3V $\pm$ 10% power supply
- Available in 6-pin SOT Green/RoHS compliant packages

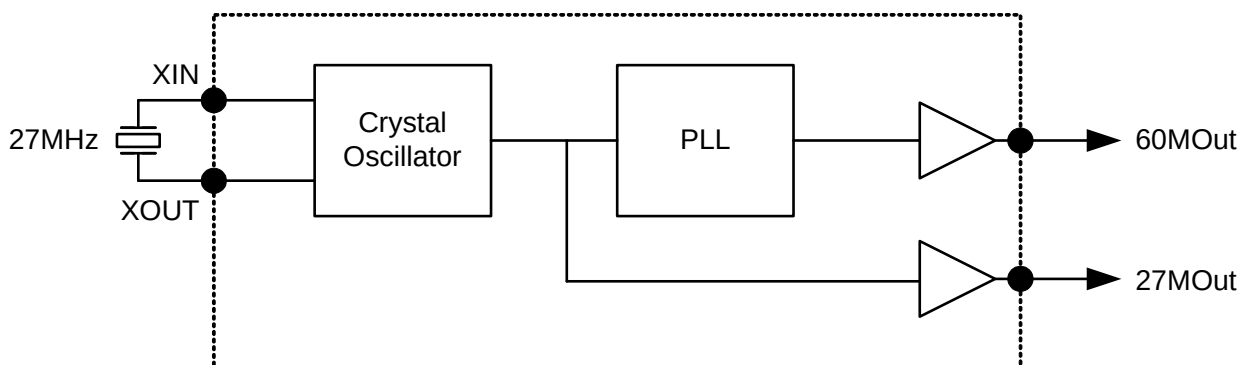
PIN CONFIGURATION



DESCRIPTION

The PL611-01-F93 is a member of PhaseLink's Quick Turn Clock™ Family. This device has been pre-configured to supply the clocking needs of products using the Sigma Designs SMP8644 and SMP8654 Secure Media Processors. The PL611-01-F93 provides two LVCMOS clock outputs from a single 27MHz fundamental crystal input saving both board space and cost when compared to competing solutions.

BLOCK DIAGRAM



PIN DESCRIPTION

Name	SOT-23	Type	Description
27MOut	1	O	27MHz LVCMOS clock output
GND	2	P	GND connection
XIN	3	I	27MHz fundamental crystal input
XOUT	4	O	27MHz fundamental crystal output
60MOut	5	O	60MHz LVCMOS clock output
VDD	6	P	3.3V power supply

Application Specific Quick Turn Clock™

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ELECTRICAL SPECIFICATIONS

ABSOLUTE MAXIMUM RATINGS

PARAMETERS	SYMBOL	MIN.	MAX.	UNITS
Supply Voltage Range	V_{DD}	-0.5	4.6	V
Input Voltage Range	V_I	-0.5	$V_{DD}+0.5$	V
Output Voltage Range	V_O	-0.5	$V_{DD}+0.5$	V
Soldering Temperature (Green package)			260	°C
Storage Temperature	T_S	-65	150	°C
Ambient Operating Temperature*		-40	85	°C

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. *Operating temperature is guaranteed by design. Parts are tested to commercial grade only.

GENERAL ELECTRICAL SPECIFICATIONS

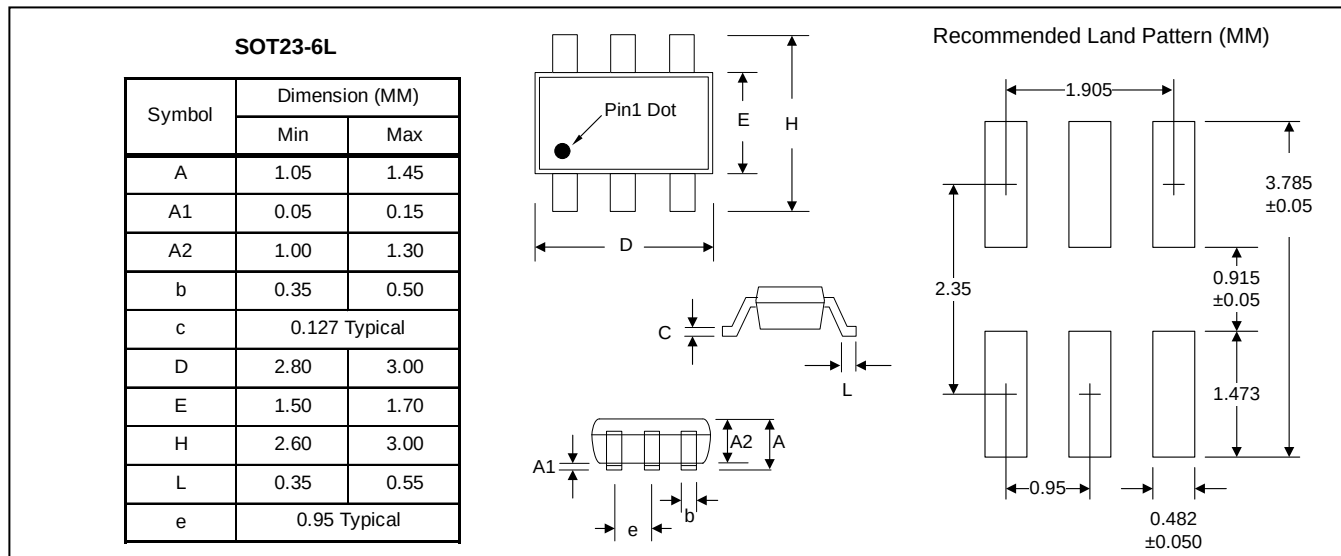
PARAMETERS	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Supply Current, Dynamic	I_{DD}	Load=15pF			20	mA
Operating Voltage	V_{DD}		2.97		3.63	V
Output Low Voltage	V_{OL}	$I_{OL} = +4mA$			0.4	V
Output High Voltage	V_{OH}	$I_{OH} = -4mA$	$V_{DD} - 0.4$			V
Output Current	I_{OSD}	$V_{OL} = 0.4V, V_{OH} = 2.4V$	10			mA
Settling Time		At power-up ($V_{DD} > 2.97V$)			2	ms
Output Rise Time	t_r	15pF Load, 10/90% V_{DD}		2.5	3.5	ns
Output Fall Time	t_f	15pF Load, 90/10% V_{DD}		2.5	3.5	ns
Duty Cycle		At $V_{DD}/2$	45	50	55	%

CRYSTAL SPECIFICATIONS

PARAMETERS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Fundamental Crystal Resonator Frequency	F_{XIN}		27		MHz
Crystal Loading Rating	$C_L (xtal)$		18		pF
Maximum Sustainable Drive Level				500	μW
Operating Drive Level			100		μW
Crystal Shunt Capacitance	C_0			6	pF
Effective Series Resistance, Fundamental	ESR			30	Ω

Application Specific Quick Turn Clock™
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PACKAGE DRAWING (GREEN PACKAGE COMPLIANT)



ORDERING INFORMATION (GREEN PACKAGE COMPLIANT)

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:
Part number, Package type and Operating temperature range

PL611-01-F93 T C X

Part Number

Shipping Option

Blank=Tube

R=Tape & Reel

Package Type

T=SOT23-6L

Temperature Range

C=Commercial (0°C to 70°C)

Part / Order Number	Marking*	Package Option
PL611-01-F93TC-R	C1F93 LLL	6-Pin SOT-23 (Tape and Reel)

*Note: LLL represents the production lot number

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