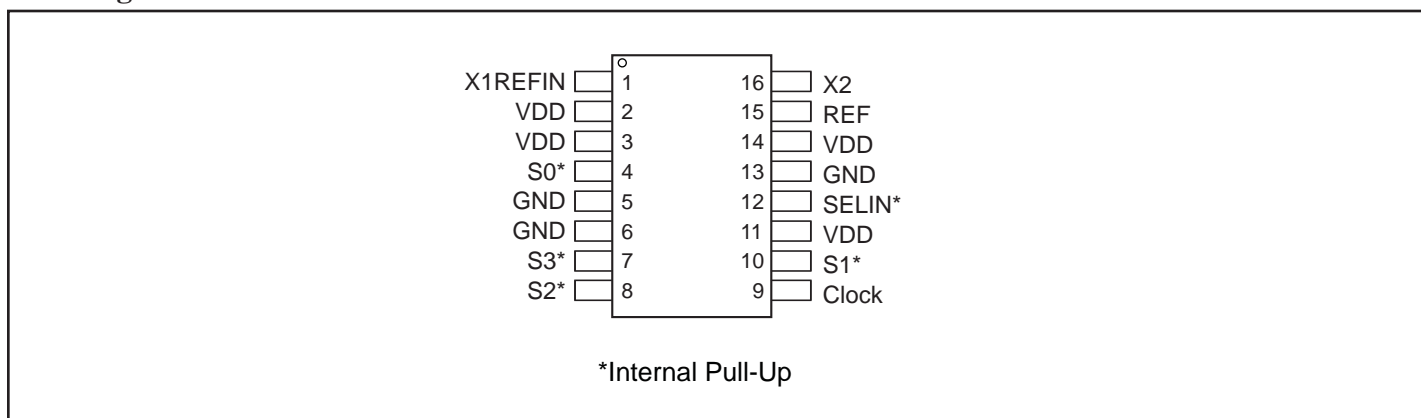


Pin Assignment

Pin Description

Pin Name	Pin No	I/O Type	Pin Description
X1/REF _{IN}	1	I	Crystal or Reference clock input. See "Recommended Crystal Specifications" for details.
V _{DD}	2, 3, 11, 14	Power	Power supply
S ₀ *	4	I	Output clock selection
GND	5, 6, 13	Ground	Ground
S ₃ *	7	I	Output clock selection
S ₂ *	8	I	Output clock selection
Clock	9	O	Clock output
S ₁ *	10	I	Output clock selection
SELIN*	12	I	Input clock selection. Low: reference clock input; High: crystal clock input
REF	15	O	Reference clock input
X ₂	16	I	Crystal clock input; leave open if SELIN=Low

* Internally Pulled High

Electrical Specifications

Maximum Ratings

Item	Rating
Supply Voltage to Ground Potential	5.5V
All Inputs and Outputs	-0.5 to V _{DD} +0.5V
Ambient Operating Temperature	-40 to +85°C
Storage Temperature	-65 to +150°C
Junction Temperature	150°C
Soldering Temperature	260°C

Note: Beyond maximum ratings may cause device damage

Recommended Operation Conditions

Parameter	Min.	Typ.	Max.	Unit
Ambient Operating Temperature	-40		+85	°C
Power Supply Voltage (measured in respect to GND)	+3.0		+3.6	V

DC Electrical Characteristics

V_{DD} = 3.3V ±10%, Ambient Temperature -40 to +85°C

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V _{DD}	Operating Voltage		3.0		3.6	V
V _{IH}	Input High Voltage		2			V
V _{IL}	Input Low Voltage				0.8	V
V _{OH}	Output High Voltage	I _{OH} = -4mA	V _{DD} -0.4			V
V _{OH}	Output High Voltage	I _{OH} = -12mA	2.4			V
V _{OL}	Output Low Voltage	I _{OL} = +12mA			0.4	V
I _{DD}	Supply Current	No Load		25		mA
I _{OS}	Short Circuit Current	Each output		±65		mA
Z _{OUT}	Nominal Output Impedance			20		Ω
Z _{IN}	Input Capacitance	Input pins		7		pF
R _{Pullup}	Internal pull-up resistor			120		KΩ

AC Electrical Characteristics

V_{DD} = 3.3V ±10%, Ambient Temperature -40 to +85°C

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
F _{cry}	Crystal Frequency			27	28	MHz
t _{Rise}	Output Clock Rise Time	20% to 80%, 15pF load			1.5	ns
t _{Fall}	Output Clock Fall Time	80% to 20%, 15pF load			1.5	ns
t _{DC}	Output Duty Cycle	Measured at V _{DD} /2, 15pF load	45	50	55	%

T _{j_short}	Short term jitter	Reference clock off		175		ps p-p
T _{j_short}	Short term jitter	Reference clock on		175		ps p-p
T _{j_long}	Long term jitter	Reference clock off; 10 μ delay		1100		ps p-p
T _{j_long}	Long term jitter	Reference clock on; 10 μ delay		1100		ps p-p
Phase Noise	Single sideband phase noise	33 MHz; 10Hz offset		-50		dBc
Phase Noise	Single sideband phase noise	33 MHz; 100Hz offset		-75		dBc
Phase Noise	Single sideband phase noise	33 MHz; 1kHz offset		-80		dBc
Phase Noise	Single sideband phase noise	33 MHz; 10kHz offset		-75		dBc
FERROR	Actual mean frequency error versus target			0		ppm

Thermal Characteristics

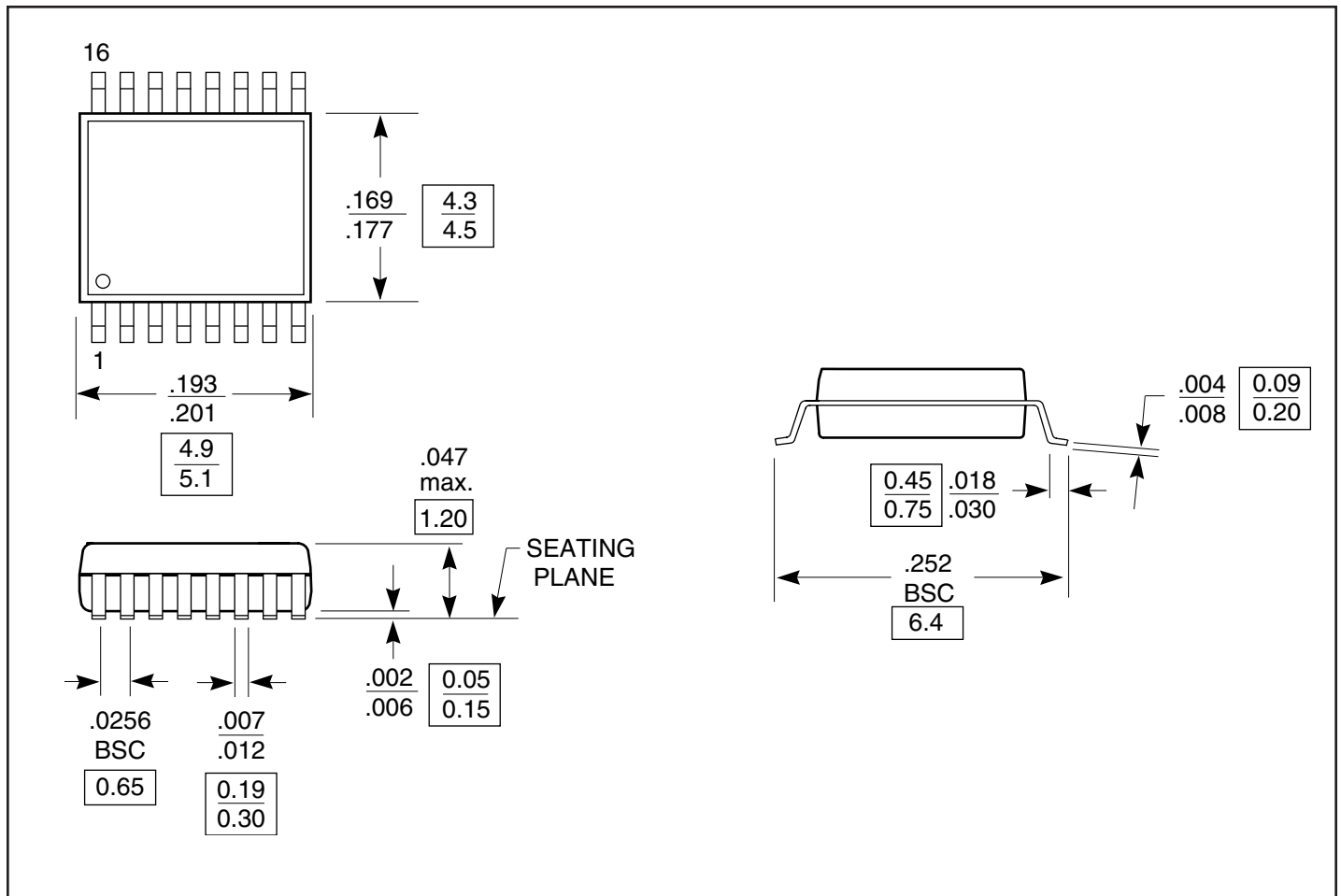
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
θJA	Thermal Resistance Junction to Ambient	Still air		78		°C/W
θJA		1 min m/s air flow		70		°C/W
θJA		3 min m/s air flow		68		°C/W
θJC	Thermal Resistance Junction to Case			37		°C/W

Recommended Crystal Specification

Pericom's 49SMLB27.0000 MHz parallel resonance crystal is recommended.

Recommended Crystal Specification

Parameter	Value	Units
Mode of oscillation	Fundamental AT	
Frequency	27	MHz
Frequency Tolerance	±50	PPM
Temperature and aging stability	±50	PPM
C0/C1 ratio	240	
Load cap	18	pF
Equivalent series resistance	30	Ω

Packaging Mechanical: 16-pin TSSOP (L16)

Ordering Information

Ordering Code	Package Code	Package Type	Operating Range
PI6C6612LE	L	Pb-free & Green 16-pin TSSOP	Industrial

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Diodes Incorporated:

[PI6C2405A-1WEX](#) [PI6CUA878NFE](#) [PI6CUA878NFEX](#) [PI6CV847LE](#) [PI6C22510LEX](#) [PI6C2401WEX](#) [PI6C2410QE](#)
[PI6CV855LE](#) [PI6CUA877NFE](#) [PI6C2410LE](#) [PI6C6612LEX](#) [PI6C2509-133LE](#) [PI6C103HE](#) [PI6CV855LEX](#)
[PI6C2509-133LEX](#) [PI6C4511WEX](#) [PI6C2404A-1WIE](#) [PI6CV857LKE](#) [PI6C2409-1WEX](#) [PI6C3Q993-5QEX](#)
[PI6C2404A-1WE](#) [PI6C4512WE](#) [PI6C2404A-1WEX](#) [PI6C2502AWE](#) [PI6C2404A-1WIE](#) [PI6C2502AWEX](#)