

CrystalFree[™] Oscillator Ultra Low Power Oscillators

PRELIMINARY DATA SHEET

3CP02

Features

- Frequency Range:
- Output Type: CMOS
- Frequency Tolerance:
- Supply Voltage:
- Power Consumption:
- Standby Current:
- Standard Package:
- Operating Temperature:
- 5.0 x 3.2 mm 0 to 70 °C -20 to 70 °C

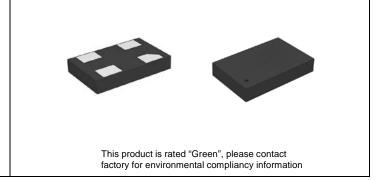
4 to 133 MHz

± 100 ppm

1.8 to 3.3 V

< 1 uA

1.9 mA (1.8 V)



Specification

Parameter	Symbol	Specifications			Conditions
Supply Voltage	VDD	1.8 V	2.5 V	3.3 V	Nominal
Output Frequency	Fout	4 to 133 MHz**			See ordering code
Frequency Stability	F _{STB}	± 100 ppm			Total Frequency Stability*
Supply Current	IDD	1.9 mA	2.0 mA	2.2 mA	Typical; No load condition; 25°C
Quiescent Current	I _{STBY}	1 uA			STBY# = GND
Input LOW level	VIL	0.3 VDD (max)			At STBY# pin
Input HIGH level	VIH	0.7 VDD (min)			
Output LOW level	Vol	0.1 VDD (max)			I _{OL} = - 1mA
Output HIGH level	V _{OH}	0.9 VDD (min)			I _{OH} = 1mA
Rise/Fall Time	T_R/T_F	2.75ns	2.3ns	1.9ns	20% to 80% x VDD. Output load (CL) = 4pF
Symmetry	SYM	45% / 55%			For frequencies < =100MHz;
		40% / 60%			For frequencies > 100MHz;
Start-up time	T _{ST}	100 us			Output valid time after VDD meets the specified range & STBY# transition
Period Jitter	PJ _{RMS}	17 ps	6 ps	5 ps	4pF load; 75MHz
Cycle to Cycle Jitter	CCJ _{MAX}	120 ps	50 ps	40 ps	4pF load; 75MHz

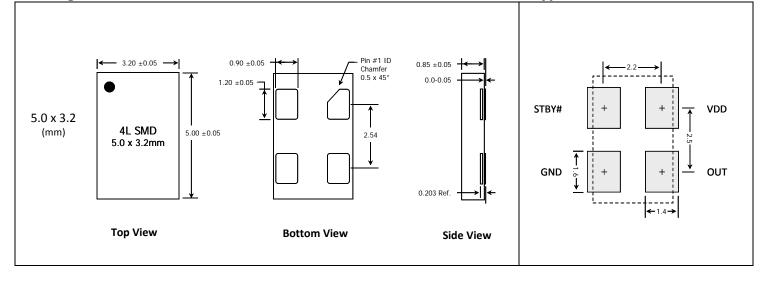
Note: Above specifications are typical unless otherwise specified.

* Stability over temperature, supply variation, 3x reflow, load variation, aging (10 years)

** 26MHz, 27MHz and 54MHz are supported by 3CV04

Package Outline and Dimensions

Typical PCB Land Pattern



Absolute Maximum Ratings

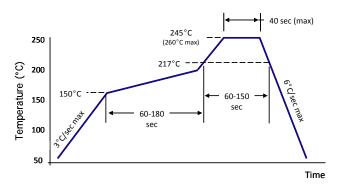
Stresses beyond those listed under *Absolute Maximum Ratings* may cause permanent damage to the device. These ratings are stress specifications only. Functional operation of product at these or under any condition beyond those listed in the operating specifications is not implied. Exposure to absolute maximum rated conditions may affect product reliability.

Item	Maximum Absolute Rating
VDD	4.6V
STBY#	-0.5V to VDD + 0.5V
OUT	-0.5V to VDD + 0.5V
Storage Temperature	-65°C to 150°C

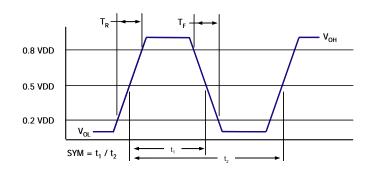
Pin Descriptions

Pin #	Name	Description			
1	STBY#	Standby Mode ¹ (0 = Output Disabled)			
2	GND	Ground			
3	OUT ²	CMOS Output			
4	VDD	Power			
 Pulled high internally Weak pull down to GND during STBY# enable and startup 					

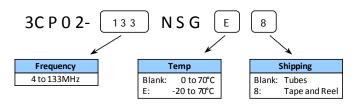
Solder Reflow Profile



Output Wave Form



Ordering Information





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Technical Support

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