

Features

- Standby Enable Disable
- Stabilities to ± 25 PPM
- Temperature Ranges to -40°C to $+85^{\circ}\text{C}$
- Supply Voltage: 5.0V

5.0V ELECTRICAL CHARACTERISTICS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency Range (F_0)	0.012 ~ 170.000MHz
Storage Temperature Range (T_{STG})	$-55 \sim +125^{\circ}\text{C}$
Supply Voltage (V_{DD})	5.0V $\pm 10\%$
Input Current (I_{DD})	
0.012 ~ 32.000MHz	18mA
32.000+ ~ 67.000MHz	50mA
67.000+ ~ 125.000MHz	80mA
125.000+ ~ 170.000MHz	90mA
Standby Current	10 μA
Output Symmetry (50% V_{DD})	40% ~ 60%
Rise/Fall Time (10%/90% V_{DD} Levels) (T_R/T_F)	
0.012 ~ 79.999999MHz	5nS
> 80.000 ~ 170.000MHz	4nS
Output Voltage (V_{OL})	10% V_{DD}
(V_{OH})	90% V_{DD} Min
Output Load (HCMOS)	15pF
Start-up Time (T_S)	10mS
Output Disable Time 1	150nS
Output Enable Time 1	10mS

ENABLE / DISABLE FUNCTION	
Pin 1	Output (pin 3)
OPEN ¹	Active
'1' Level $V_{IH} \geq 70\%V_{DD}$	Active
'0' Level $V_{IL} \leq 30\%V_{DD}$	High Z

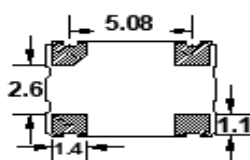
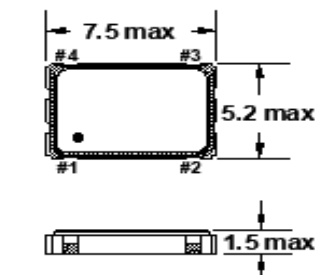
Available Options by Stability & Operating Temp for 5.0V		
Frequency Stability	Operating Temperature ($^{\circ}\text{C}$)	Frequency Range (MHz)
$\pm 100\text{PPM}^2$	$-10 \sim +70$	0.012 ~ 170.000
$\pm 100\text{PPM}^2$	$-40 \sim +85$	0.012 ~ 170.000
$\pm 50\text{PPM}^2$	$-10 \sim +70$	0.012 ~ 170.000
$\pm 50\text{PPM}^2$	$-40 \sim +85$	0.012 ~ 170.000
$\pm 25\text{PPM}^2$	$-10 \sim +70$	0.012 ~ 162.000
$\pm 25\text{PPM}^3$	$-40 \sim +85$	0.012 ~ 156.000
$\pm 25\text{PPM}^3$	$-10 \sim +70$	0.012 ~ 162.000

¹ An internal pull-up resistor from pin 1 to pin 4 allows active output if pin 1 is left open

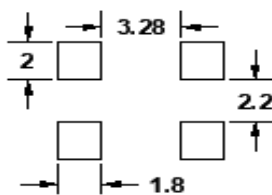
² Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, Reflow, and one-year aging.

³ Inclusive of 25°C tolerance and operating temperature rang.

DIMENSIONS / MECHANICAL SPECIFICATIONS



Recommended Solder Pad Layout



Dimensions in mm

Pin Connections

#1 E/D #3 Output
#2 GND #4 V_{DD}

Note:

*A 0.01μF capacitor should be placed between V_{DD} (Pin 4) and GND (Pin2) to minimize power supply line noise.

*Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellations, reference pin shape, etc. may vary.

STANDARD SPECIFICATIONS

PARAMETERS	MAX (Unless otherwise noted)
Maximum Soldering Temp / Time	260°C / 10 Seconds x 2
Moisture Sensitivity Level	1
Termination Finish	Au (0.3~1μm) over Ni (1.27~8.89μm)
Seal Method	Seam
Lead (Pb) Free	Yes
ROHS/REACH Compliant	Yes

FO7HB

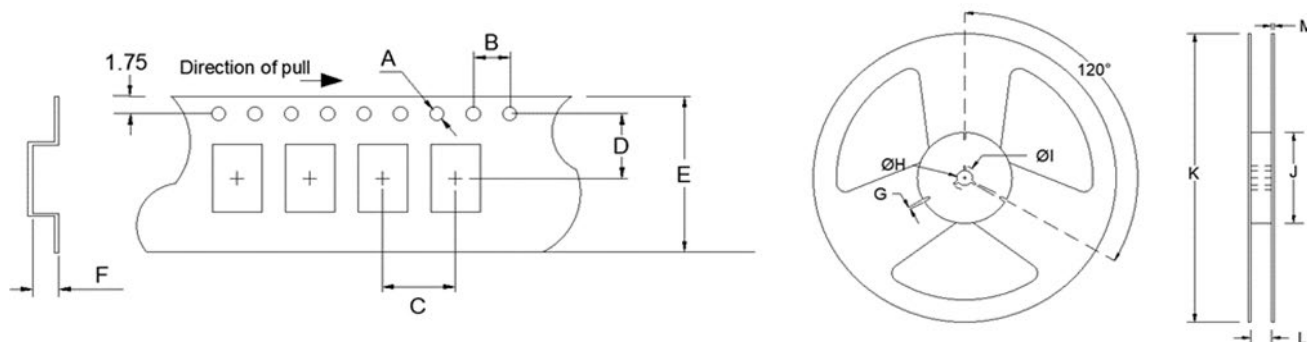
(Former F4101 Series)

7mm x 5mm
HCMOS SMD Oscillator



TAPE SPECIFICATIONS (mm)							REEL SPECIFICATIONS (mm)						
A	B	C	D	E	F	REEL QTY	G	H	I	J	K	L	M
ø1.5	4.0	8.0	7.5	16.0	2.15	1,000	2.0	ø13	ø21	ø80	ø255	17.5	2.0

* Not all frequencies in the frequency range, or every combination of stability, temp range, and voltage available.
See stabilities and op temps for each V_{DD}.



Available Options & Part Identification for HCMOS SMD Oscillator FO7HB*

Sample PN: **FO7HBABM25.0-T1**

F	O7HB	A	B	M	25.0	-T1
<u>Fox</u>	<u>Model Number</u>	<u>Voltage</u> A = 5V±10%	<u>Stability</u> A = ±100 PPM B = ±50 PPM D = ±25 PPM E = ±20 PPM	<u>Operating Temperature</u> E = -10 to +70°C M = -40 to +85°C	<u>Frequency (MHz)</u>	<u>Values Added Options</u> Blank = Bulk T1 = 1,000 pcs

Reliability Test Conditions

Please contact Abracon Quality Assurance department

Mouser Electronics

Authorized Distributor

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ABRACON:

[FO7HBAAE16.0-T1](#) [FO7HBAAM100.0-T1](#) [FO7HBAAM14.31818-T2](#) [FO7HBAAM4.915-T1](#) [FO7HBAAM4.915-T2](#)
[FO7HBADM32.0-T1](#) [FO7HBAAE8.0-T2](#) [FO7HBAAM20.0-T1](#) [FO7HBADM32.0-T2](#) [FO7HBAAE20.0-T1](#)
[FO7HBAAE40.0-T1](#) [FO7HBAAM25.0-T2](#) [FO7HBAAM50.0-T1](#) [FO7HBAAE16.0-T2](#) [FO7HBAAM10.0-T1](#)
[FO7HBAAM16.0-T2](#) [FO7HBAAM32.0-T1](#) [FO7HBAAE10.0-T1](#) [FO7HBAAM32.0-T2](#) [FO7HBAAE20.0-T2](#)
[FO7HBAAE40.0-T2](#) [FO7HBADM40.92-T1](#) [FO7HBADM40.92-T2](#) [FO7HBAAM10.0-T2](#) [FO7HBAAM16.0-T1](#)
[FO7HBAAM24.0-T2](#) [FO7HBAAE10.0-T2](#) [FO7HBAAM100.0-T2](#) [FO7HBAAM14.31818-T1](#) [FO7HBAAM40.0-T1](#)
[FO7HBAAM24.0-T1](#) [FO7HBAAM25.0-T1](#) [FO7HBAAM40.0-T2](#) [FO7HBAAM50.0-T2](#) [FO7HBAAE48.0-T1](#)
[FO7HBAAE48.0-T2](#) [FO7HBAAE8.0-T1](#) [FO7HBAAM20.0-T2](#) [FO7HBAAE16.0-BULK](#) [FO7HBABM20.0-BULK](#)
[FO7HBAAE8.0-BULK](#) [FO7HBAAM4.0-BULK](#) [FO7HBAAE48.0-BULK](#) [FO7HBAAE20.0-BULK](#) [FO7HBAAM4.0-T2](#)
[FO7HBAAE27.0-T1](#) [FO7HBAAE11.0592-T1](#) [FO7HBAAE11.0592-T2](#) [FO7HBAAE22.1184-T1](#) [FO7HBAAM1.8432-T1](#)
[FO7HBAAM1.8432-T2](#) [FO7HBAAM14.7456-T1](#) [FO7HBAAM14.7456-T2](#) [FO7HBAAM19.6608-T1](#)
[FO7HBAAM19.6608-T2](#) [FO7HBAAM29.4912-T1](#) [FO7HBAAM29.4912-T2](#) [FO7HBAAM4.0-T1](#)