



3.2x2.5mm 32.768 kHz SMD Oscillator

O3HF

(former F32K Series)

DATASHEET

- HCMOS Output
- Stability of -170 ~ +10 PPM
- Temperature Range -40°C to +85°C

ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	32.768 kHz
Temperature Range	
Operating (T _{OPR})	-40 ~ +85°C
Storage (T _{STG})	-55 ~ +125°C
Frequency Tolerance @ 25°C	+5 ± 20 PPM
Frequency Stability, ref. 25°C	
-20°C ~ +70°C	-120 ~ +10 PPM
-40°C ~ +85°C	-170 ~ +10 PPM
Supply Voltage (V _{DD})	3.3V ± 10% (Std.) 1.5V ~ 5.5V (Usable)
Input Current (I _{DD}) (no load)	1.5 µA
Output Symmetry (50% V _{DD})	40% ~ 60%
Rise/Fall Time (T _R /T _F) (20%/80% V _{DD} Levels)	200 nS
Output Voltage (V _{OL}) (V _{OH})	0.4V Max V _{DD} - 0.4V Min
Output Load (HCMOS)	15 pF
Start-up Time (T _s) (V _{DD} = 1.5 ~ 5.5V, T _a = -40°C ~ +85°C)	1 Second
Maximum Soldering Temp / Time	260°C / 10 Seconds x 2 cycles
Moisture Sensitivity Level (MSL) per J-STD-033	N/A
Termination Finish	Au (0.3~1µm) over Ni (1.27~8.89µm)
Seal Method	Seam
Lead (Pb) Free	Yes, no exemptions
RoHS Compliant	Yes
REACH Compliant (latest version)	Yes

ENABLE / DISABLE FUNCTION

Pin1	Output (pin 3)
OPEN ¹	Active
'1' Level V _{IH} ≥ 80%V _{DD}	Active
'0' Level V _{IL} ≤ 20%V _{DD}	High Z

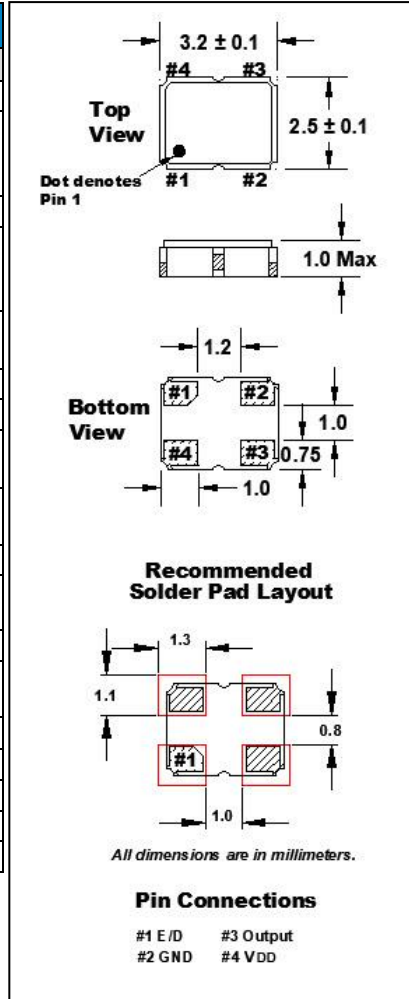
¹ An internal pull-up resistor from pin 1 to pin 4 allows active output if pin 1 is left open

Notes:

*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



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Title / Description: O3HF SERIES STANDARD SPECIFICATIONS	
Drawing Number: 100565	Size: A
Part Number:	Cage: 61429
Draftsperson: MAJ	Approved: BEC
Revision Date: 10/5/2020	



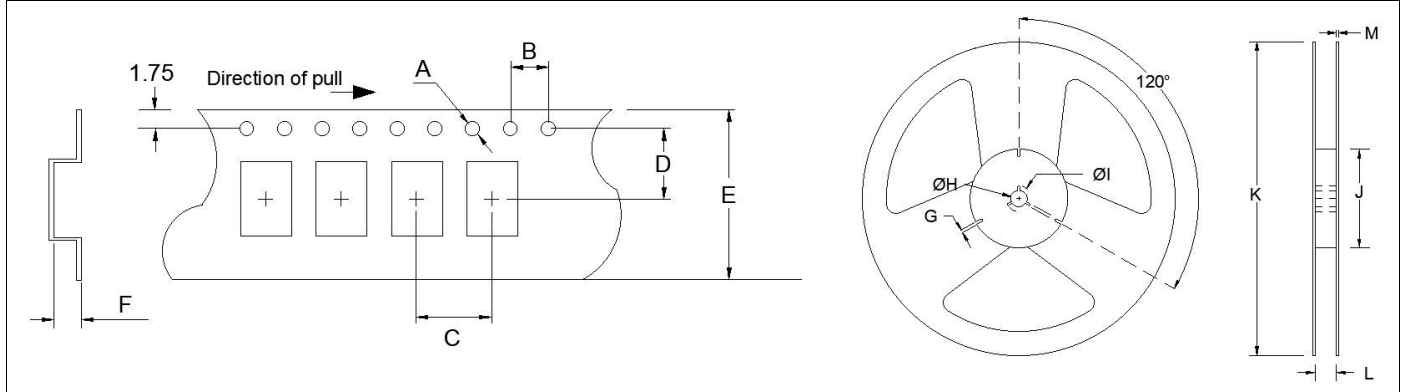
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Tape Specifications (millimeters)							Reel Specifications (millimeters)						
A	B	C	D	E	F	Reel Qty. Options	G	H	I	J	K	L	M
Ø1.5	4.0	4.0	3.5	8.0	1.4	-T3 = 3,000* *default -T1 = 1,000	2.5	Ø13	Ø22	Ø60	Ø178	8.0	1.6



Available Options & Part Identification

Example: **F O3HF C Y M 0.032768**

F	O3HF	C	Y	M	0.032768
Fox	Model Number	Voltage C = 3.3V ± 10%	Stability Y = -170 ~ +10PPM	Operating Temperature M = -40 to +85°C	Frequency (MHz)



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