

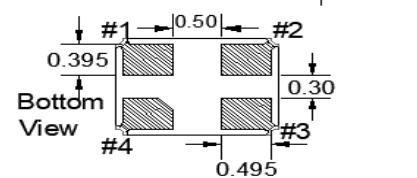
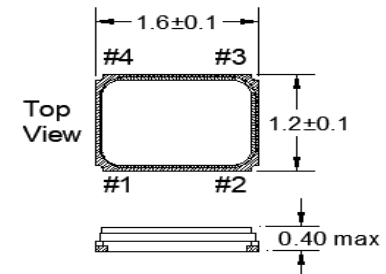
Features

- Tolerances down to ± 10 PPM
- Stabilities down to ± 10 PPM
- Temperature Ranges as wide as -55°C to $+125^{\circ}\text{C}$

STANDARD SPECIFICATIONS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency Range	23.900 ~ 80.000 MHz
Frequency Tolerance @ 25°C	(See options below)
Frequency Stability, ref 25°C	(See options below)
Temperature Range	
Operating (T_{OPR})	(See options below)
Storage (T_{STG})	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Shunt Capacitance (C_0)	3 pF
Load Capacitance (C_L)	(See options below)
Drive Level	100 μW
Aging per year (@ 25°C)	± 3 PPM
Maximum Soldering Temp / Time	260°C / 10 Seconds x 2
Moisture Sensitivity Level (MSL) per J-STD-033	N/A
Termination Finish	Au ($0.3 \sim 1 \mu\text{m}$) over Ni ($1.27 \sim 8.89 \mu\text{m}$)
Seal Method	Seam
Lead (Pb) Free	Yes
RoHS Compliant	Yes, no exemptions
REACH Compliant (latest version)	Yes

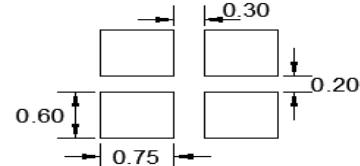
Frequency Range (MHz)	Operating Mode	Max ESR Ω
23.900 ~ 29.999999 MHz	Fundamental	150
30.000 ~ 80.000 MHz	Fundamental	100

DIMENSIONS / MECHANICAL SPECIFICATIONS



#1 - Crystal #2 Lid - connect to GND
#4 - NC #3 - Crystal

Recommended Solder Pad Layout



Dimensions are in millimeters.

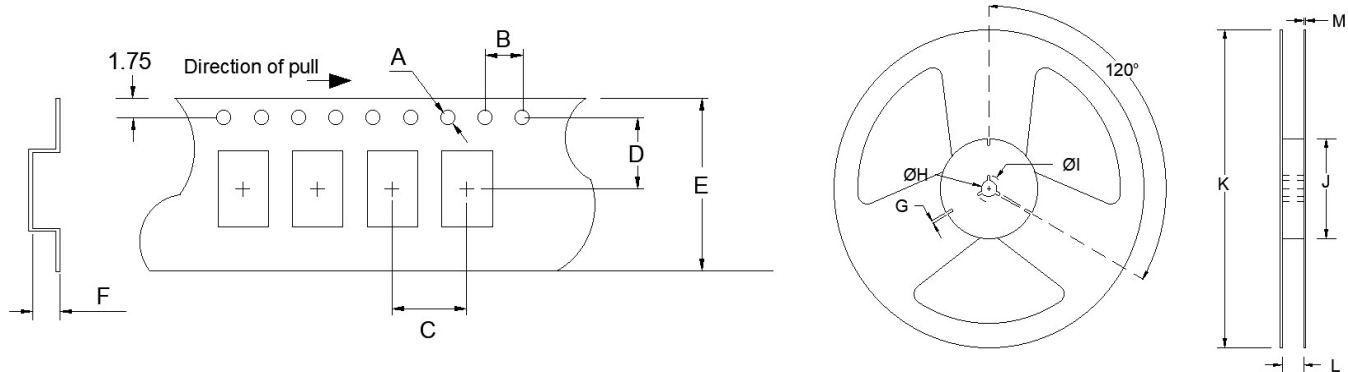
Note: Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellations, Reference pin shape, reference pin location, etc. may vary.

AVAILABLE OPERATING TEMPERATURES AND STABILITIES*

Operating Temperature	± 10 PPM	± 15 PPM	± 20 PPM	± 25 PPM	± 30 PPM	± 50 PPM	± 100 PPM
$-10 \sim +60^{\circ}\text{C}$	O	O	O	O	O	O	N/A
$-10 \sim +70^{\circ}\text{C}$	O	O	O	O	O	O	N/A
$-20 \sim +70^{\circ}\text{C}$	O	O	O	O	O	O	N/A
$-30 \sim +85^{\circ}\text{C}$	X	O	O	O	O	O	N/A
$-40 \sim +85^{\circ}\text{C}$	X	O	O	O	O	O	N/A
$-40 \sim +105^{\circ}\text{C}$	X	X	X	X	X	O	O
$-40 \sim +125^{\circ}\text{C}$	X	X	X	X	X	O	O
$-55 \sim +125^{\circ}\text{C}$	X	X	X	X	X	O	O

Key: O = Available, X = Not Available, N/A = Not Applicable

TAPE SPECIFICATIONS (mm)							REEL SPECIFICATIONS (mm)						
A	B	C	D	E	F	REEL QTY	G	H	I	J	K	L	M
ø1.55	4.0	4.0	3.5	8.0	0.45	-T1 = 1,000 -T2 = 2,000 -T3 = 3,000	2.0	ø13	ø21	ø60	ø180	9.0	1.2



Available Options & Part Identification for SMD Crystal COBS¹

Sample PN: **FCOBSBCVM40.0-T3**

F	COBS	B	C	V	M	40.0	-T3
Fox	Model Number	Tolerance B = ±50 PPM C = ±30 PPM D = ±25 PPM E = ±20 PPM F = ±15 PPM H = ±10 PPM	Stability A = ±100 PPM B = ±50 PPM C = ±30 PPM D = ±25 PPM E = ±20 PPM F = ±15 PPM H = ±10 PPM	Load Capacitance ² C = 4 pF V = 7pF D = 8pF E = 10pF G = 12pF M = 20PF	Operating Temperature C = 0 to +70°C D = -10 to +60°C E = -10 to +70°C F = -20 to +70C K = -30 to +85°C M = -40 to +85°C P = -40 to +105°C I = -40 to +125°C T = -55 to +125°C	Frequency (MHz)	Values Added Options Blank = Bulk T1 = 1,000 pcs T2 = 2,000 pcs T3 = 3,000 pcs

¹ Not all frequency, tolerance, stability, load, and operating temperature combinations may be available.

² Listed load capacitances represent the most commonly used. Other load capacitances are available. Contact us for assistance

Reliability Test Conditions

Please contact Abracon Quality Assurance department

Mouser Electronics

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

ABRACON:

[FC0BSFEEM23A99675-T3](#) [FC0BSCBDM50.0-T3](#) [FC0BSFEEN23A99675-T3](#) [FC0BSHEMM40.0-T3](#)
[FC0BSCCEC32.0-T3](#) [FC0BSEEDF32.0-T3](#) [FC0BSFFDK38.4-1-T3](#) [FC0BSHFDDK38.4-1-T3](#) [FC0BSEEDM25.0-T3](#)
[FC0BSEEW32.0-T3](#) [FC0BSCCEF25.0-T3](#) [FC0BSHFDM50.0-1-T3](#)