

Datasheet

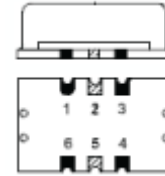
AXIS30

WIDEBAND VCXO WITH LOW JITTER
SMD replacement of Fujitsu M2 (F100)

FEATURES

- SMD replacement of Fujitsu M2 (F100)
- SMD Package, size 14.4 x 9.5 x 6 mm.
- Wideband VCXO till +/-3000 ppm
- HCMOS output logic with low jitter
- Frequency range : 10.00 to 90.00 MHz

14.4 x 9.5 x 6 mm max.



Parameter	min.	typ.	max.	Unit	Condition
Frequency range	10		90	MHz	
Standard frequencies	12.288 / 16.384 / 22.579 / 24.576 / 27.000 / 28.224			MHz	
Frequency stability				ppm	
Initial tolerance				ppm	
vs. operating frequency range			± 80	ppm	-20°~+70°C (see Note 2)
vs. supply voltage variation	-10		10	ppm	
vs. load change	-5		5	ppm	
long term (aging) 1 st year	-10		10	ppm	@ 40°C
Aging following years	-5		5	ppm	@ 40°C
Frequency adjustment range					
Electronic Frequency Control (EFC) range *see Note 3	± 500		± 1100	ppm	Option 2 = " "
	± 500		± 1600	ppm	Option 2 = "500"
	± 1000		± 2100	ppm	Option 2 = "1000"
	± 1500		± 2600	ppm	Option 2 = "1500"*
	± 2000		± 3200	ppm	Option 2 = "2000"*
	± 2500			ppm	Option 2 = "2500"*
	± 3000			ppm	Option 2 = "3000"*
EFC voltage V _C (Note 3)	0.25		4.75	V	Option 1 = "50" (5 V)
	0.15		3.15	V	Option 1 = "33" (3.3 V)
EFC slope (Df / DV _C)	positive				
EFC input impedance	100			kΩ	
RF output					
Signal waveform	HCMOS				
Load	15			pF	
Rise & decay time				10	ns
Symmetry (duty cycle)	40		60	%	@ V _S /2
Start-up time				4	ms
Supply voltage V_S	4.75	5.0	5.25	V	Option 1 = "50" (5 V)
	3.13	3.3	3.47	V	Option 1 = "33" (3.3 V)
Current consumption (steady state)				40	mA @ +25°C
Operable temperature range	-45		+90	°C	
Storage temperature range	-50		+95	°C	
Enclosure (see drawing)	14.4x9.5x6 max			mm	IEC 61837 CO 27
Weight				3	gram
Packing	Tape & reel				IEC 60286-3
ESD Sensitivity	1500			V	HBM as IEC 61000-4-2
Construction	RoHS/ Lead(Pb) -free				EU directive 2002/95/EC

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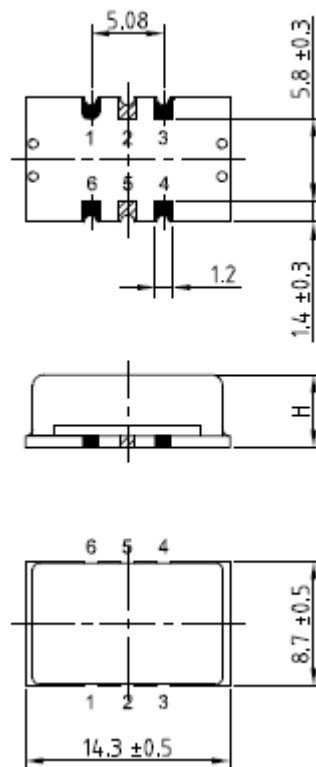
Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Frequency vs. temperature response is a 2nd order parabola with turn-over point at $\approx +20^{\circ}\text{C}$ to $+30^{\circ}\text{C}$
3. *Pulling Range Option 2 = "1500" or larger only possible with EFC voltage 0.25V ~ 4.75 V

Ordering Code

Model (Specification)	Option 1	Option 2	Frequency [MHz]
	Supply	Pulling Range	
AXIS30	50	500	28.224

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	VC	Control Voltage (EFC)
2	N.C.	No connection
3	GND	Ground
4	RF OUT	RF Output (see table)
6	Vs	Supply Voltage

Environmental conditions

Test	IEC 60068 Part ...	IEC 60679-1 clause ...	Test conditions
Visual inspection, dimensions		4.3	Enclosure styles as in IEC 60679-3 or 61837, if applicable
Solderability	2-20	4.6.3	Test Ta (235 ± 5)°C Method 1
Resistance to soldering heat	2-58		Test Tb Method 1A, 5s
Shock*	2-27	4.6.8	Test Ea, 3 x per axes 100g, 6 ms half-sine pulse
Vibration, sinusoidal*	2-6	4.6.7	Test Fc, 30 min per axes, 10 Hz - 55 Hz 0,75mm; 55 Hz - 2 kHz, 10g
Endurance tests			
- ageing		4.7.1	30 days @ 85°C, OCXO @25°C
- extended aging		4.7.2	1000h, 2000h, 8000h @85°C

Other environmental conditions on request

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