

Specification	AXIS45	Issue: 02	2009-09-22
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Oscillator type : Wideband VCXO in double-sealed DIL14 package
Direct replacement of Fujitsu M2 (F100)

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	5		30		
Standard frequencies	16.384 / 24.576 / 27.000 / 28.224			MHz	
Frequency stability				ppm	
Initial tolerance				ppm	
vs. temperature in operating temperature range		± 100		ppm	-20°C ~+70°C
vs. supply voltage variation			± 10	ppm	
vs. load change			± 5	ppm	
long term (aging)			± 10	ppm/year	@ 40°C
Frequency adjustment range					
Electronic Frequency Control (EFC) (Pulling range)	± 500			ppm	Option 2 = “ ”
	± 1000			ppm	Option 2 = “1000”
	± 1500*			ppm	Option 2 = “1500” *
See Note 2	± 2000*			ppm	Option 2 = “2000” *
	± 2500*			ppm	Option 2 = “2500” *
	± 3000*			ppm	Option 2 = “3000” *
EFC voltage V_C (Note 2)	0.25		4.75	V	Option 1 = “50” (5 V)
	0.15		3.15	V	Option 1 = “33” (3.3 V)
EFC slope ($\Delta f / \Delta V_C$)	positive				
EFC linearity				%	
EFC input impedance	100			k Ω	
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)			30	mA	
Operating temperature range	-20		+70	°C	
Operable temperature range	-40		+85	°C	
Storage temperature range	-45		+90	°C	
Enclosure (see drawing) L x W x H	20.7x13.1x7.5 max.			mm	IEC 60679-3 CO 02
Weight			3	gram	
Packing	sticks				IEC 60286-3
ESD Sensitivity	1500			V	HBM, IEC 61000-4-2
RoHS compliance	Full				
Handling, Processing and Testing	see AXAN-011 and AXAN-012				www.axtal.com

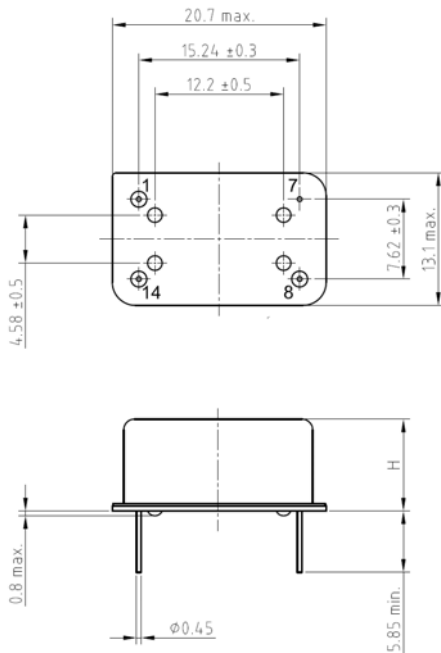
Notes:

- Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
- *Pulling Range Option 3 > 1000 only possible with EFC voltage 0.25V ~ 4.75 V

Ordering Code:

Model (Specification)	Option 1	Option 2	Frequency [MHz]
	Supply	Pulling Range	
AXIS45	50	2000	28.224

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	V _C	Control Voltage (EFC)
7	GND	Ground
8	RF OUT	RF Output
14	V _S	Supply Voltage

Environmental conditions

Test	IEC 60068 Part ...	IEC 60679-1 clause ...	Test conditions
Sealing tests (if applicable)	2-17	4.6.2	Gross leak: Test Qc, Fine leak: Test Qk
Solderability Resistance to soldering heat	2-20 2-58	4.6.3	Test Ta (235 ± 5)°C Method 1 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 - extended aging		4.7.1 4.7.2	30 days @ 85°C, OCXO @ 25°C 1000h, 2000h, 8000h @ 85°C

Other environmental conditions on request