

Specification	AXE135M	Issue: 01	Date: 2009-11-04
Oscillator type : Crystal Oscillator (PXO) in DIL8 package			

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	0.1		60	MHz	HCMOS
	10		50	MHz	Sine wave
	1		800	MHz	PECL / LVDS
Frequency stability					
Overall tolerance	± 20 to ± 100			ppm	Note 2
Initial tolerance				ppm	@25°C
vs. operating temperature range	± 10 to ± 50			ppm	See tables
long term (aging)			± 3	ppm/year	
RF output					
Signal waveform	Sine wave HCMOS/TTL PECL LVDS				Option 2 = "S" Option 2 = "H" Option 2 = "P" Option 2 = "L"
Load	50 Ω 15 pF or 2 TTL 50 Ω + bias				Option 2 = "S" Option 2 = "H" Option 2 = "P" or "L"
Amplitude	0			dBm	Option 2 = "S" / 3.3 V
	+10			dBm	Option 2 = "S" / 5.0 V
	According to relevant Logic Standard				Option 2 = "H", "P", "L"
Symmetry (duty cycle)	40		60	%	Option 2 = "H"
	45		55	%	Option 2 = "P", or "L"
Oscillator Enable/Disable function (HCMOS and Sine wave output only)	Enable: Pin 1 High or Open Disable: Pin 1 Low				V _H ≥ 2.0 V V _L ≤ 0.8 V
Supply voltage V_S	3.15	3.3	3.45	V	Option 1 = "3"
	4.75	5.0	5.25	V	Option 1 = "5"
Current consumption (Note 3)	15 ~ 30			mA	Option 2 = "S"
	25 ~ 100			mA	Option 2 = "H"
	25 ~ 100			mA	Option 2 = "P" or "L"
Storage temperature range	-55		+105	°C	
Enclosure (see drawing)	12.7 x 12.7 x 5.1 max.			mm	IEC 60679-3 CO-21
Weight				5	gram
Packing	Tube or pallet				IEC 60286-3
ESD Sensitivity	1500			V	HBM, IEC 61000-4-2
Handling and Testing	In accordance with AXAN-011				www.axtal.com
Processing	In accordance with AXAN-012				www.axtal.com

Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1 unless otherwise stated
2. Overall tolerance includes initial tolerance, stability over temperature, pushing, pulling and vibration
3. Depending on frequency and supply voltage

Frequency Stability over Temperature*

Table 1

Code4	Stability
10	± 10
15	± 15
20	± 20
30	± 30
50	± 50

* Not all combinations of tables 1 and 2 may be available. Consult factory

Table 2

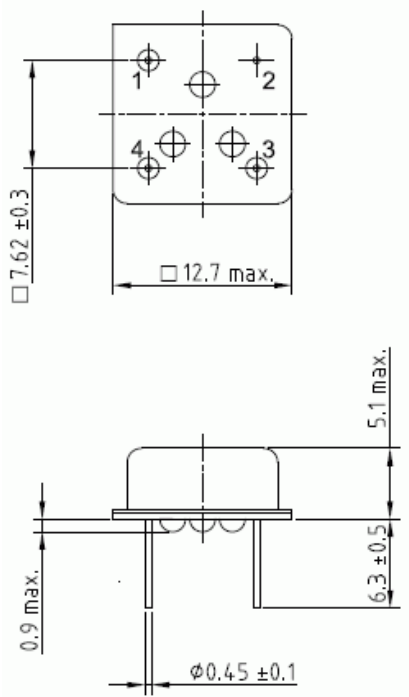
Lower Temperature		Upper Temperature	
Code5	Temp/°C	Code5	Temp/°C
0	0	A	+50
1	-10	B	+60
2	-20	C	+70
3	-30	D	+75
4	-40	E	+80
		F	+85

Ordering Code:

Part number	Option 1	Option 2	Option 3	Option 4
	Supply Voltage	Output	Stability	Temp. range
AXE135M	5 or 3	S, H, P, L	See tables 1 & 2	

Example: AXE135M-5-H-10-0A – 10.000 MHz

Enclosure drawing



Pin connections

Sine wave and HCMOS Output

Pin #	Symbol	Function
1	OE	Output Enable/Disable
2	GND	Ground
3	RF OUT	RF Output
4	Vs	Supply Voltage

Pin connections

PECL and LVDS Output

Pin #	Symbol	Function
1	N.C. or CompOUT	No connection or Complementary RF Output
2	GND	Ground
3	RF OUT	RF Output
4	Vs	Supply Voltage