

<b>Specification</b>	<b>AXLE135</b>	Issue: 01	Date:2008-05-07
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**Oscillator type : TCXO in Half-size DIL package**

Parameter	min.	typ.	max.	Unit	Condition
<b>Frequency range</b>	10		50	MHz	(Clipped) Sinewave HCMOS, PECL, LVDS
	1		800	MHz	
<b>Frequency stability</b>				ppm	
vs. temperature	± 0.5 ppm to ± 5 ppm			ppm	See tables 1 & 2
vs. supply voltage variation		± 0.1	± 0.3	ppm	
vs. load change			± 0.2	ppm	± 10 %
long term (aging) per year			± 1	ppm	@+40°C
<b>Frequency adjustment range</b>					
Mechanical (internal trimmer)	± 3			ppm	Option 1 = blank
Electronic Frequency Control (EFC)	± 5			ppm	Option 1 = "V"
EFC voltage $V_C$	0.15	1.65	3.15	V	Option 2 = "3"
	0.5	2.5	4.5	V	Option 2 = "5"
EFC slope ( $\Delta f / \Delta V_C$ )	positive				
EFC input impedance	100			k $\Omega$	
<b>RF output</b>					
Signal waveform	Sine wave Clipped Sine wave HCMOS PECL LVDS				Option 3 = "S" Option 3 = "C" Option 3 = "H" Option 3 = "P" Option 3 = "L"
Load	50 $\Omega$ 10 k $\Omega$    10 pF 15 pF 50 $\Omega$ + bias				Option 3 = "S" Option 3 = "C" Option 3 = "H" Option 3 = "P" or "L"
Amplitude		0		dBm	Option 3 = "S" / 3.3 V
	0.8 1.0	+10		dBm V p-p V p-p	Option 3 = "S" / 5.0 V Option 3 = "C" / 3.3 V Option 3 = "C" / 5.0 V
According to relevant Logic Standard					
<b>Supply voltage <math>V_S</math></b>	3.15	3.3	3.45	V	Option 2 = "3"
	4.75	5.0	5.25	V	Option 2 = "5"
<b>Current consumption</b> (Note 3)	12 ~ 20			mA	Option 3 = "S"
	2 ~ 30			mA	Option 3 = "C"
	15 ~ 50			mA	Option 3 = "H"
	25 ~ 100			mA	Option 3 = "P" or "L"
<b>Storage temperature range</b>	-45		+90	°C	
<b>Enclosure (see drawing)</b>	12.7 x 12.7 x 5.1 max.			mm	IEC60679-3 CO 21
<b>Marking</b>	AXLE135 Freq wwAXPyy				Specification Frequency ww=week, yy=year
<b>Packing</b>	Tape & reel				IEC 60286-3
<b>Construction</b>	Lead(Pb) -free				

**Notes:**

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. All combinations of options might not be available. Please consult factory
3. Depending on frequency and supply voltage

## Frequency Stability over Temperature

Table 1

Code4	Stability
05	± 0.5
10	± 1.0
15	± 1.5
20	± 2.0
25	± 2.5
30	± 3.0
35	± 3.5
50	± 5.0

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

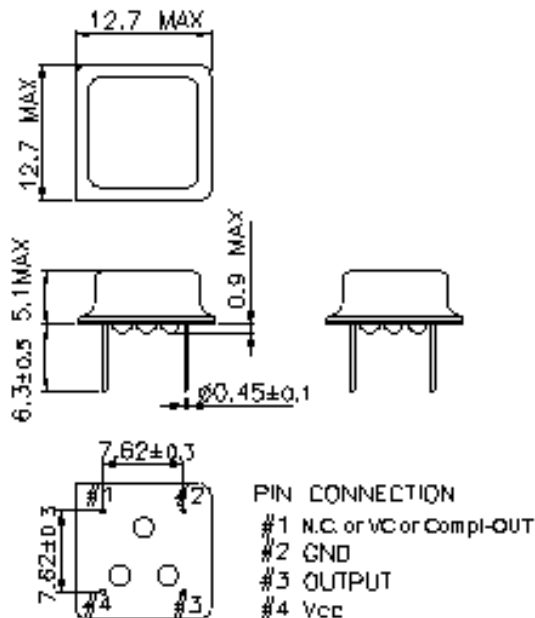
## Ordering Code:

Part number	Option 1*	Option 2	Option 3*	Option 4	Option 5
	EFC*	Supply Voltage	Output*	Stability	Temp. range
AXLE135	_ or "V"	5 or 3	S, C, H, P, L	See tables 1 & 2	

\*EFC Option not available for PECL and LVDS Output

Example: AXLE135V-5-S-10-3D

## Enclosure drawing



## Pin connections (No EFC)

Pin #	Symbol	Function
1	N.C. or ComplOUT	No Connection or Complementary Output (PECL and LVDS)
2	GND	Ground
3	RF OUT	RF Output
4	Vs	Supply Voltage

## Pin connections (With EFC)

Pin #	Symbol	Function
1	VC	Voltage Control (EFC)
2	GND	Ground
3	RF OUT	RF Output
4	VS	Supply Voltage