

Quartz Crystal Oscillator

Through-Hole Mounted SPXO

8-Pin HCMOS Output DIP Clock Oscillator



Static sensitive device

Legacy part - Not recommended for new designs

Frequency Stability Options

Operating Temperature Range		Frequency Stability (PPM)					
Available Options		±15	±20	±25	±30	±50	±100
Standard	0°C to +70°C	ES	DS	AS	FS	BS	CS
Industrial	-40°C to +85°C	EI	DI	AI	FI	BI	CI
Military	-55°C to +125°C	N/A	N/A	N/A	N/A	N/A	CM

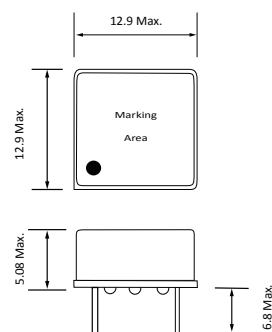
Operating Conditions

Storage Temp	-55°C to +125°C	
Option Codes		
Supply Voltage	Option Code	
+5.0V DC	0	
+3.3V DC	3	
Enable/Disable	Y=1	N=0
Symmetry	H=45:55	N=40:60

Electrical Characteristics Ta = +25°C, ^{Note}Inclusive of VDD ±10%, Load Change ±10%, Ageing, Shock & Vibration

Parameter	Condition	Frequency Range (MHz)	V _{DD} = +5.0V	V _{DD} = +3.3V
Input Current	I _{DD}	All Conditions (See Note)	0.50 to 23.999	20mA Max.
			24.00 to 49.999	30mA Max.
			50.00 to 69.999	40mA Max.
			70.00 to 150.00	60mA Max.
Frequency Stability	Δf		See Options Above	
Symmetry	Sym	@50% V _{DD} Level	40/60% (with 45/55% Option)	
Output Voltage	V _{OL}	"0" Level	10% V _{DD} Max.	
	V _{OH}	"1" Level	90% V _{DD} Min.	
Rise Time	T _R	10% to 90% V _{DD}	10nS Max.	8nS Max.
Fall Time	T _F	90% to 10% V _{DD}	10nS Max.	8nS Max.
Start Up Time	T _S	0V to V _{DD}	10mS Max.	
Load	TTL Load	0.50 to 150.00	1-10 TTL	1-10 TTL
		0.50 to 49.999	50pF	30pF
	HCMOS Load	50.00 to 69.999	30pF	15pF
		70.00 to 150.00	15pF	15pF

Dimensions (mm)

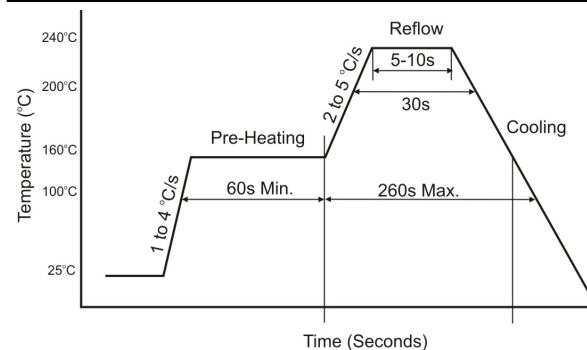


Marking & Specification Code Example

Type	Tristate	V	Stability	OTR	Symmetry	Frequency	Date-Code (wwyy)
12	1	3	C	S	N	20.000	1611
8-Pin	Enable/Disable	+3.3V	±100PPM	0°C to +70°C	60/40%	20.000MHz	Week 16 2011

AEL Spec. Code = 1213 CSN 20.000MHz

Reflow Solder Profile (260°C)



Pin Connections

Pin #	Connection	Enable/Disable Function	
#1	E/D	Pin 1 Input	Pin 5 Output
#4	Ground	Open	Enable O/P
#5	Output	V _{IH} ≥ 2.0V DC	Enable O/P
#8	V _{CC}	V _{IH} < 0.8V DC	Disable O/P