Quartz Crystal Oscillator

HCMOS Compatible Ouput with Enable/Disable

7x5mm Clock Oscillator

RoHS compliant 2002/95/EC

Static sensitive device

Current product - Not recommended for new designs

Frequency Stability Options							
Operating Temperature Range		**Frequency Stability (PPM)**					
Available Temp. Range Options		±15	±20	±25	±30	±50	±100
Standard	-10°C to +70°C	ES	DS	AS	FS	BS	CS
Industrial	-40°C to +85°C	EI	DI	AI	FI	BI	CI

Operating Conditions	
Storage Temp	-55°C to +125°C

Option Codes		
Supply Voltage	Option Code	
+5.0V DC	0	
+3.3V DC	3	
+2.8V DC	2	
+1.8V DC	18	
Symmetry	(H)igh	(N)orm

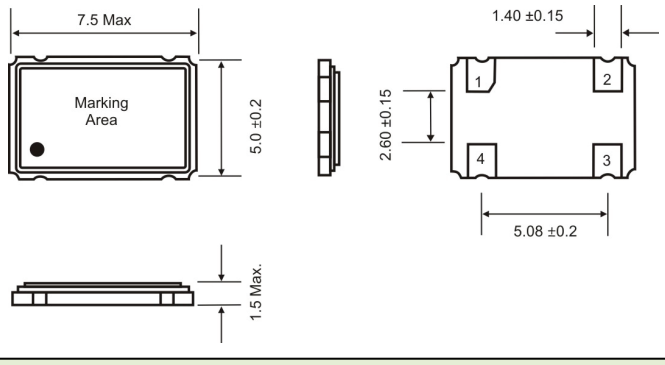
Marking & Specification Code Format						
Type	Voltage Code	Stability	OTR	Symmetry	Frequency	WWYY
431	0/3/2/18	See Above	S or I	N or H	20.000	1608

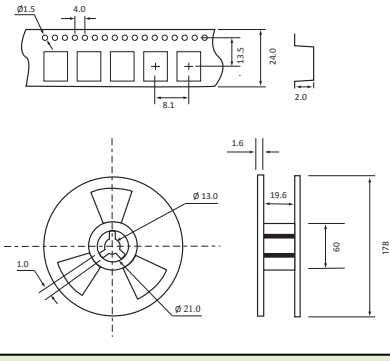
Electrical Characteristics Ta = +25°C, Note Inclusive of VDD ±10%, Load Change ±10%, Ageing, Shock & Vibration

Parameter	Condition	V_{DD} = +5.0V	V_{DD} = +3.3V	V_{DD} = +2.8V	V_{DD} = +1.8V
Input Current	1.00 to 23.999	20mA Max	15mA Max.	12mA Max.	10mA Max.
	24.00 to 48.999	30mA Max.	20mA Max.	15mA Max.	12mA Max.
	50.00 to 69.999	40mA Max.	30mA max.	20mA Max.	15mA Max.
	70.00 to 125.000	60mA Max.	45mA Max.	30mA Max.	25mA Max.
Frequency Stability	All Conditions (See Note)	See Options Above			
Symmetry	@50% V_{DD} Level	40/60% (45/55% Available)			
Output Voltage	"0" Level	10% V_{DD} Max.			
	"1" Level	90% V_{DD} Min.			
Rise Time	10% to 90% V_{DD}	5nS Max.	8nS Max.	6nS Max.	7nS Max.
Fall Time	90% to 10% V_{DD}	5nS Max.	8nS Max.	6nS Max.	7nS Max.
Start Up Time	0V to V_{DD}	10mS Max.			
Output Load	HCMOS Load	15pF Max.			

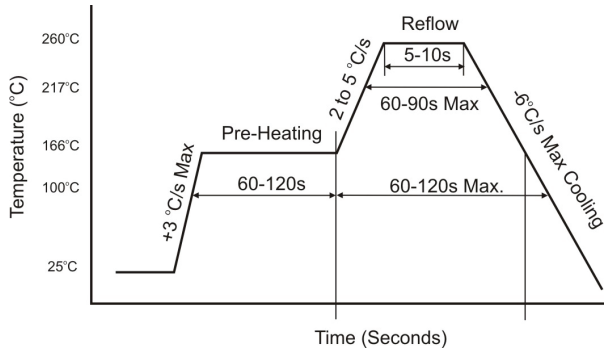
Dimensions (mm)

1,000pcs/Reel





Reflow Solder Profile (260°C)



Pin Connections

Pad #	Connection
#1	E/D
#2	Ground
#3	Output
#4	V_{CC}

Enable/Disable Function	
Pin 1 Input	Pin 8 Output
Open	Enable O/P
$V_{IH} \geq$ 2.0V DC	Enable O/P
V_{IH} < 0.8V DC	Disable O/P