



Static sensitive device

Current part - Recommended for new designs

Frequency Stability Options				
Operating Temperature Range		Frequency Stability (PPM)		
Available Temp. Range Options		±25PPM	±50PPM	±100PPM
Standard	-10°C to +70°C	AS	BS	CS
Industrial	-40°C to +85°C	AI	BI	CI

Marking & Specification Code Format					
Type	Voltage Code	Stab vs OTR	Frequency	Pulling	WWYY
VC601	See Panel	See Above	20.000	in PPM	1611

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) or (N)

Electrical Characteristics Ta = +25°C, ^{Note} Inclusive of V _{DD} ±10%, Load Change ±10%, Ageing, Shock & Vibration							
Parameter	Condition	V _{DD} = +1.8V ±5%	V _{DD} = +2.8V ±5%	V _{DD} = +3.3V ±5%	V _{DD} = +5.0V ±10%		
Available Frequency	MHz	0.650 - 125.00		0.650 - 125.00	1.0 - 80.00		
Initial Freq. Accuracy	Tuned to nominal freq.	V _C = 0.9V ±0.15V	V _C = 1.25V ±0.2V	V _C = 1.65V ±0.2V	V _C = 2.5V ±0.2V		
Output Logic High "1"	TTL	NA	NA	2.4V Min.	2.4V Min.		
	CMOS	1.62V Min.	2.25V Min.	2.97V Min.	4.5V Min.		
Output Logic Low "0"	TTL	NA	NA	0.4V Max.	0.4V Max.		
	CMOS	0.183V Max.	0.25V Max.	0.33V max.	0.5V max.		
Voltage Control Parameters	Pulling Range *	±80PPM Min.	±80PPM Min.	±80PPM Min.	±200PPM Min.		
	Control Voltage	0.9V _{DC} ±0.9V	1.25V _{DC} ±1.0V	1.65V _{DC} ±1.35V	2.5V _{DC} ±2.0V		
Output Load		TTL = 2TTL gates : CMOS = 15pF					
Rise/Fall Time	TTL/CMOS	6ns Max : 4ns Typ.					
Duty Cycle	10% to 90% V _{DD}	(N)ormal = 50% ±10% : (H)igh = 50% ±5%					
Start Up Time	0V to V _{DD}	10ms Max : 5ms Typ.					
Input Current	Frequency Dependant	10-45mA (For 27MHz 10mA at 3.3V)					
Integrated Phase Jitter	12kHz - 20MHz	1ps Max.					
Period Jitter	RMS	2ps Typ.					
	p-p	14ps Max.					
Phase Noise	Typ. at 27MHz with +3.3V	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz
		-40dBc/Hz	-104dBc/Hz	-132dBc/Hz	-147dBc/Hz	-152dBc/Hz	-150dBc/Hz
Linearity		6% Typ. : 10% Max.					
Modulation Bandwidth	at -3dB	10kHz Min. V _{CONTROL} at 1.65V or 2.5V					
Slope Polarity	(Transfer Function)	Monotonic & Positive: Increase Voltage = Increase O/P Freq.					
Input Impedance		1MΩ Typ.					
Ageing		±3PPM per Year Max.					

Dimensions (mm)

