

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
VC300	See Panel	See Above	20.000	in PPM	1611

Operating Conditions	
Storage Temp	-55°C to +125°C
Option Codes	
Supply Voltage	Option Code
+3.3V DC	3
+2.8V DC	2
+1.8V DC	18

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%			
Available Frequency	MHz	6.00 - 54.00		6.00 - 54.00			
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			
Output Logic High "1"	HCMOS	1.62V Min.	2.52V Min.	2.97V Min.			
Output Logic Low "0"	HCMOS	0.18V Max.	0.28V Max.	0.33V Max.			
Voltage Control Parameters	Pulling Range *	±80PPM Min.		±80PPM Min.			
	Control Voltage	0.9V _{DC} ±0.9V	1.25V _{DC} ±1.0V	1.65V _{DC} ±1.35V			
Output Load		HCMOS = 15pF					
Rise/Fall Time	TTL/CMOS	6ns Max : 4ns Typ.					
Duty Cycle	10% to 90% V _{DD}	50% ±10%					
Start Up Time	0V to V _{DD}	10ms Max : 5ms Typ.					
Input Current	Frequency Dependant	10-25mA (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)

