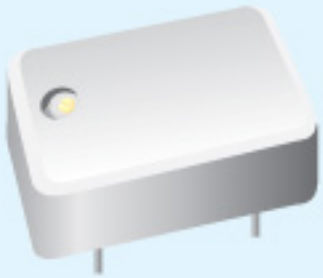
VCXO

HVB,HVC Series

HUAFENG CRYSTAL

- Voltage controlled crystal oscillator
- HCMOS/TTL output
- 5.0V / 3.3V supply voltage
- Custom lead length options available
- Wide frequency and pull range

High stability(±5ppm)



■ ELECTRICAL SPECIFICATIONS

Frequency Range		1.000 to 100.000MHz
Operating Temperature Range		0 to +70℃ or -40 to +85℃
Storage Temperature Range		-40 to +85℃
Supply Voltage(V_{DD})		5.0V_{DC} ±5% 3.3V_{DC}±5%
Aging(at 25℃)		±3ppm/year Max
Load drive Capability		10TTL Load or 15pF HCMOS Load
Start Up Time		10msec Max
Frequency Deviation/	2.5V_{DC}±2.0V	±10, ±30, ±50, ±100ppm Min
Pin 1 Control Voltage	2.5V_{DC}±2.5V	±10, ±30, ±50, ±100, ±150ppm Min
	1.65V_{DC}±1.65V_{DC}(or ±1.5V_{DC})	±10, ±30, ±50, ±100, ±150ppm Min
Linearity		±20, ±15, ±10, ±5%(Optional)
Input Current	1.000 to 20.000MHz	20mA Max
	20.001 to 40.000MHz	30mA Max
	40.001 to 60.000MHz	40mA Max
	60.001 to 100.000MHz	50mA Max
Frequency Stability		±50, ±25, ±20, ±10ppm (See table 1.)
Output Voltage Logic High(V_{OH})	w/TTL Load	2.4V_{DC} Min
	w/HCMOS Load	90% of V_{DD} Min
Output Voltage Logic Low(V_{OL})	w/TTL Load	0.4V_{DC} Max
	w/HCMOS Load	10% of V_{DD} Max
Duty Cycle	at 50% of Waveform	50±10%(STD)
	w/HCMOS Load or	50±5%(Optional)
	1.4V_{DC} w/TTL Load	
Rise / Fall Time		5 nsec Max
Period Jitter: Absolute		±100ps Max ≤60.000MHz
		±200ps Max>40.000MHz
Period Jitter: One Sigma		±25ps Max ≤60.000MHz
		±50ps Max >40.000MHz

■ PART NUMBERING GUIDE

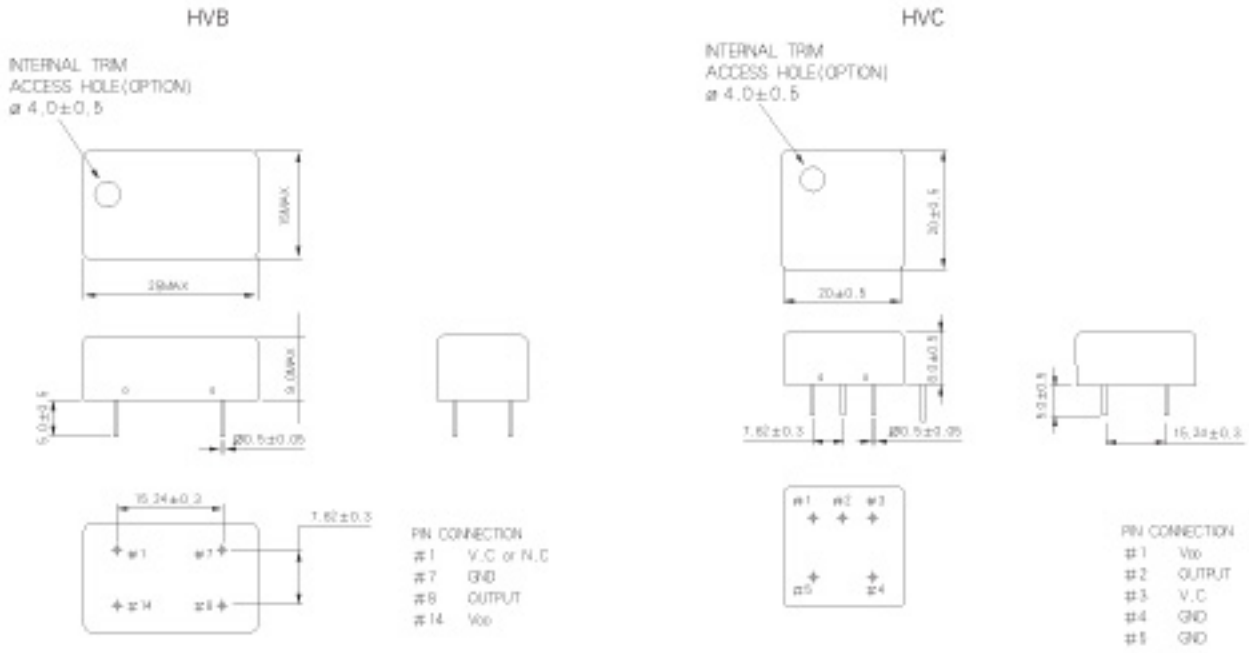
HVB - 15 A D B T - 10.000M

- B:HVB / C:HVC
- FREQUENCY STABILITY — TABLE 1.
- OPERATING TEMPERATURE RANGE — TABLE 1.
- DUTY CYCLE — BLANK:40/60, D:45/55
- DEVIATION — A:±10PPM Min B:±30PPM Min C:±50PPM Min D:±100PPM Min E:±150PPM Min F:±200PPM Min
- OUTPUT — T:TTL, M:HCMOS, C:COMPATIBLE
- FREQUENCY — M:MHz

TABLE 1.

OPERATING TEMPERATURE		FREQUENCY STABILITY (±PPM) * Denotes Availability					
Range	Code	5PPM	10PPM	15PPM	20PPM	30PPM	50PPM
		05	10	15	20	30	50
0~50℃	A	*	*	*	*	*	*
0~60℃	B		*	*	*	*	*
-10~60℃	C		*	*	*	*	*
0~70℃	D		*	*	*	*	*
-10~70℃	E		*	*	*	*	*
-20~70℃	F			*	*	*	*
-40~85℃	G					*	*

■ MECHANICAL DIMENSIONS



■ ENVIRONMENTAL / MECHANICAL SPECIFICATIONS

PARAMETER	SPECIFICATIONS
Seal Integrity	Bubble test in Perfluorocarbon at +125℃ ± 5℃ for 60 seconds minimum(Internal Crystal Only).
Solderability	Sn63 Solder dip at +230℃ ± 5℃ for 5 seconds/95% coverage.
Marking Permanency	10 Stokes with brush afrer 1 minute soak in solvent,3 times.
Shock	Random drop on hard wooden plate 3 times from a height of 50cm.
Vibration	Frequency with an amplitude of 1.5mm sweeping between 10Hz to 55Hz within 1 minute(approximately) for 2 hours minimum on each axis (X,Y and Z)for a total of 6 hours.