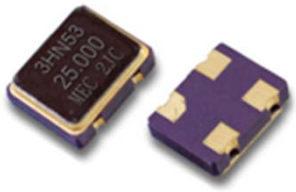
HN	Wide Operating Temperature Over - 55 °C to +125 °C	SMD	LVCMOS	1.8 V / 2.5 V / 3.3 V / 5.0 V	Min. 1.25 MHz	Max. 60.0 MHz

Applications

- Femto second integrated phase jitter (500 fs typical , 12 KHz to 20 MHz) .
- Superior phase noise : -145 dBc/Hz at 10 KHz and -150 dBc/Hz at 100 KHz offset .
- Wide Operating Temperature range from -55 °C to +125 °C



RoHS Compliance

General specifications of all available packages , at Ta=+25°C , CL=15pF

Model	" HN " series [Tri - state Function on pad No. 1]							
Output Logic	LVCMOS							
Supply Voltage V_{DD}	1.8 V_{DD} ± 10%	+2.5 V_{DD} ± 10%	+3.3 V_{DD} ± 10%	+5.0 V_{DD} ± 10%				
	code is " 18 "	code is " 25 "	code is " 3 "	code is " 5 "				
High "1" (90% of V_{DD} min.)	1.62 V min.	2.25 V min.	2.97 V min.	4.5 V min.				
Logic Low "0" (10% of V_{DD} max.)	0.18 V max.	0.25 V max.	0.33 V max.	0.5 V max.				
Current Consumption (max.)	1.25 ~ 20 MHz : 7 mA	1.25 ~ 20 MHz : 8 mA	1.25 ~ 20 MHz : 10 mA	1.25 ~ 20 MHz : 12 mA				
	20.0 ~ 60.0 MHz : 12 Ma	20.0 ~ 60.0 MHz : 15 mA	20.0 ~ 60.0 MHz : 18 mA	20.0 ~ 60.0 MHz : 20 mA				
Rise Time (Tr) / Fall Time (Tf)	7 n sec. (max.)	7 n sec. (max.)	10 n sec. (max.)	10 n sec. (max.)				
	Measured between 10% ↔ 90% of wave form (CL = 15pF)							
Frequency Stability Code	Over -55°C to +125°C	" K 50 " for ± 50 ppm ; " K 100 " for ± 100 ppm						
Load	15 pF							
Start-up Time	1.25 ~ 32.0 MHz : 5 m sec. (max.) ; 32.0 ~ 60.0 MHz : 10 m sec. (max.)							
Duty Cycle	Standard: 50% ± 10%; Option: 50% ± 5%. Please add "-S" at the end of the part number for ± 5% .							
Tri-state Function on pad No. 1	Tri-state on pad 1 is standard for HN53 and HN57 series.							
Phase Jitter (RMS) [25 MHz , 3.3V]	500 fs (typical) [12 KHz to 20 MHz integated]							
SSB Phase Noise [25 MHz , 3.3V]	Offset	10 Hz	100 Hz	1 KHz	10 KHz	100 KHz	1 MHz	10 MHz
	dBc / Hz (typical)	-85	-115	-140	-145	-150	-152	-155
Storage Temperature	-55°C to + 125°C							
Aging at Ta=+25ºC	± 2 ppm max. for first year							

(1) Inclusive of 25ºC tolerance, operating temperature range, ±10% input voltage variation, load change, aging shock and vibration

Part Number Format and Examples

	[1] Supply Voltage	[2] Holder Type	-	[3] Frequency Stability	[4] T	-	[5] Center Frequency
Examples (1)	18	HN53	-	K50	T	-	25.000
(2)	3	HN57	-	K100	T	-	50.000

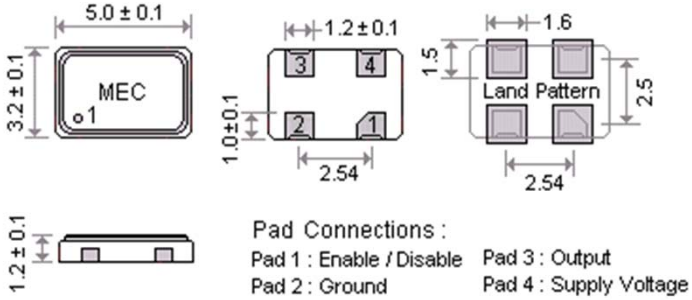
Ex (1) : 18HN53 - K50T - 25.000 [1.8V , HN53 package , ± 50ppm from -55°C to 125°C , Tri-state , 25.000MHz]

Ex (2) : 3HN57 - K100T - 50.000 [3.3V , HN57 package , ± 100ppm from -55°C to 125°C , Tri-state , 50.000MHz]

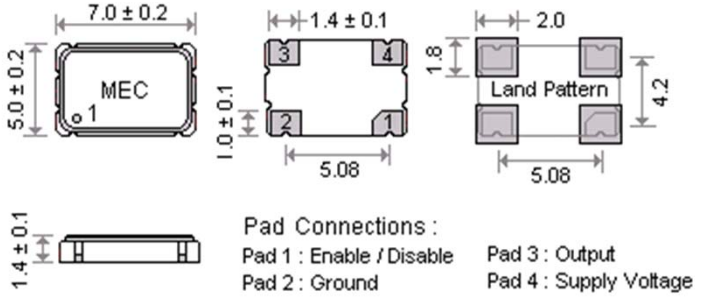
[1]	Supply voltage , " 18 " for +1.8V ; " 25 " for +2.5V ; " 3 " for +3.3V		
[2]	Holder Type : HN53 (5.0 * 3.2 * 1.2 mm) ; HN57 (7.0 * 5.0 * 1.4 mm)		
[3]	If non-standard please enter the desired stability after " K " , Example " K 50 " : represents ± 50ppm over -55 to +125°C		
[4]	" T " for Tri-state	[5]	Frequency in MHz

Outline Dimensions (Unit : mm) , Suggested pad Layout for SMDs

[HN53]



[HN57]



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