

H22

H32

H53

SWO

SMD

TTL / CMOS

1.8V

2.5V

3.3V

5.0V

Min.

312.5KHz

Max.

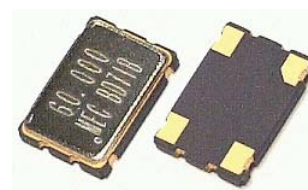
160MHz

Applications

- CPU , Graphics , Multimedia A / V clocks
- Fast Ethernet and Gigabit Ethernet clocks
- MPEG / DVD / HDTV clocks
- NTSC / PAL encoder / decoder clocks
- Laser engine pixel / set - top clocks
- PLL / synthesizer clocks
- OC-3 , OC-12 , OC-48 and OC-192 clocks
- Fibre channel and ADSL clocks
- SONET / SDH / ATM clocks



RoHS Compliance

General Specifications [TA = +25°C , V_{DD} = at specified voltage , Load : 15 pF]

Model		" H22 " ; " H32 " ; " H53 " and " SWO " series			
		Overall Frequency Range	Supply Voltage Choices	Output Logic	Package Dimensions
" SWO " series		0.3125 ~ 125.0 MHz	1.8V ; 2.5V ; 3.3V or 5.0V	T T L / CMOS	5.0 x 7.0 x 1.4 mm
" H53 " series		1.0 ~ 125.0 MHz	1.8V ; 2.5V ; 3.3V or 5.0V	T T L / CMOS	3.2 x 5.0 x 1.2 mm
" H32 " series		0.5 ~ 50.0 MHz	1.8V ; 2.5V ; 3.3V or 5.0V	T T L / CMOS	2.5 x 3.2 x 1.0 mm
" H22 " series		0.5 ~ 50.0 MHz	1.8V ; 2.5V ; 3.3V	T T L / CMOS	2.0 x 2.5 x 0.95 mm
Supply Voltage (V _{DD})		+ 1.8V D.C.±5%	+ 2.5V D.C.±5%	+ 3.3 V D.C.±5%	+ 5.0V D.C.±10%
		code is " 18 "	code is " 25 "	code is " 3 "	code is " 5 "
Available Frequency Range by V _{DD}		1.0 ~ 160.0 MHz	0.3 ~ 160.0 MHz	0.3 ~ 160.0 MHz	0.5 ~ 125.0 MHz
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		[1.0 ~ 1.5 MHz] 5 mA max.	[0.3 ~ 1.5 MHz] 5 mA max.	[0.3 ~ 1.5 MHz] 5 mA max.	[0.3 ~ 1.5 MHz] 5 mA max.
		[1.5 ~ 20 MHz] 8 mA max.	[1.5 ~ 20 MHz] 8 mA max.	[1.5 ~ 20 MHz] 8 mA max.	[1.5 ~ 20 MHz] 10 mA max.
		[20.0 ~ 50.0 MHz] 15 mA max.	[20.0 ~ 50.0 MHz] 15 mA max.	[20.0 ~ 50.0 MHz] 15 mA max.	[20.0 ~ 50.0 MHz] 15 mA max.
		[50.1 ~ 125.0 MHz] 22 mA max.	[50.1 ~ 125.0 MHz] 25 mA max.	[50.1 ~ 125.0 MHz] 35 mA max.	[50.1 ~ 125.0 MHz] 40 mA max.
Tri-state Function on pad No. 1	Pad No. 1	Tri - state	Tri - state	Tri - state	Tri - state
	Package	H22 ,H32 ,H53 ,SWO	H22 ,H32 ,H53 ,SWO	H22 ,H32 ,H53 ,SWO	H22 ,H32 ,H53 ,SWO
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 ⁽¹⁾ Codes		Frequency Stability over Operating Temperature Range	± 25 ppm	± 50 ppm	± 100 ppm
		Commercial (-10°C to +70°C)	A	B	C
		Industrial (-40°C to +85°C)	D	E	F
Load		15 pF ; (30 pF and 50 pF load are also available for +3.3V and +5.0V V _{DD})			
Duty Cycle (at 50% of wave form)		Standard: 50% ± 10%; Option: 50% ± 5%. Please add "-S" at the end of the part number for ± 5% .			
Start -up Time (Ts)		1.0 ~ 32.0 MHz : 5 m sec. (max.) ; 32.0 ~ 125.0 MHz : 10 m sec. (max.)			
Storage Temperature		- 50°C to 100°C			
Aging		± 5 ppm per year (max.)			

Note : ⁽¹⁾ Inclusive of 25°C tolerance , operating temperature range , ±10% input voltage variation , load change , aging , shock and vibration.

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