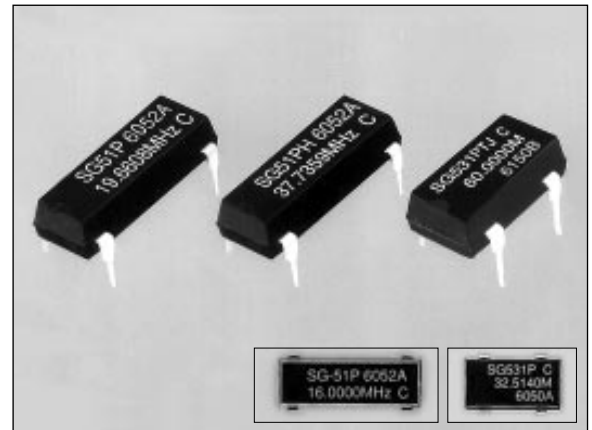


FULL SIZE DIP HIGH FREQUENCY CRYSTAL OSCILLATOR

SG-51 series

HALF SIZE DIP HIGH FREQUENCY CRYSTAL OSCILLATOR

SG-531 series



Actual size

Specifications (Characteristics)

Item	Symbol	SG-51P/531P	SG-51PTJ/531PTJ	SG-51PH/531PH	Remarks	
		Specifications				
Output frequency range	f_0	1.0250MHz to 26.0000MHz	26.0001MHz to 66.6667MHz			
Power source voltage	MAX. supply voltage	V_{DD-GND}	-0.3V to +7.0V			
	Operating voltage	V_{DD}	5.0V±0.5V			
Temperature range	Storage temperature	T_{STG}	-55°C to +125°C	-55°C to +100°C		
	Operating temperature	T_{OPR}	-10°C to +70°C			
Soldering condition (lead part)	T_{SOL}	Under 260°C within 10 sec.			Don't heat up the package more than 150°C	
Frequency stability	$\Delta f/f_0$	B: ±50ppm C: ±100ppm			-10°C to +70°C B Type is possible up to 55.0MHz	
Current consumption	I_{OP}	23mA MAX.	35mA MAX.		No load condition	
Duty	C-MOS level	$T_{W/T}$	40% to 60%	—	40% to 60%	1/2 V_{DD} level
	TTL level		45% to 55%		—	1.4V level
Output voltage	V_{OH}	$V_{DD}-0.4V$ MIN.	2.4V MIN.	$V_{DD}-0.4V$ MIN.		
	(I_{OH})	-400μA			-4mA	
	V_{OL}	0.4V MAX.				
	(I_{OL})	16mA	8mA	4mA		
Output load condition (fan out)	C-MOS	CL	50pF MAX.	—	50pF MAX.	
	TTL	N	10TTL MAX.	5TTL MAX.	—	
Output enable/disable input voltage	V_{IH}	2.0V MIN.	3.5V MIN.	2.0V MIN.		
	V_{IL}	0.8V MAX.	1.5V MAX.	0.8V MAX.		
Output disable current	I_{OE}	12mA MAX.	28mA MAX.	20mA MAX.		
Output rise time	C-MOS level	T_{TLH}	8nsec. MAX.	—	7nsec. MAX.	C-MOS load : 20% → 80% V_{DD}
	TTL level		5nsec. MAX.	—	—	TTL load : 0.4V → 2.4V
Output fall time	C-MOS level	T_{THL}	8nsec. MAX.	—	7nsec. MAX.	C-MOS load : 80% → 20% V_{DD}
	TTL level		5nsec. MAX.	—	—	TTL load : 2.4V → 0.4V
Oscillation start up time	t_{OSC}	4msec. MAX.	10msec. MAX.		More than for 1ms until $V_{DD}=0V \rightarrow 4.5V$ Time at 4.5V to be 0sec.	
Aging	f_a	±5ppm/year MAX.			$T_a=25^\circ C, V_{DD}=5V$, first year	
Shock resistance	S.R.	±20ppm MAX.			Drop test of 3 times on a hard board from 75cm height or excitation test with 3000G × 0.3ms × 1/2 sine wave in 3 directions	

Note: · Unless otherwise stated, characteristics (specifications) shown in the above table are based on the rated operating temperature and voltage condition.
· External by-pass capacitor is recommended.

External Dimensions

(Unit : mm)

