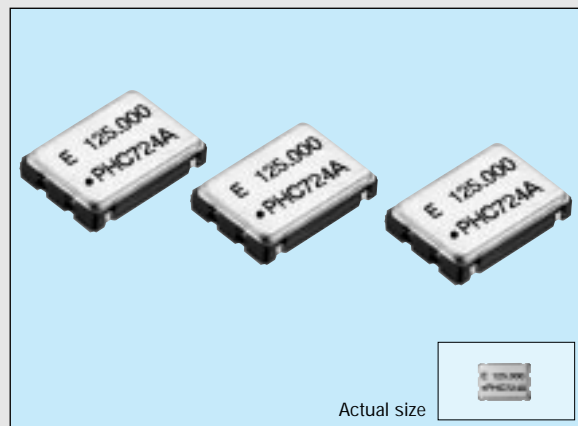


PROGRAMMABLE HIGH-FREQUENCY CRYSTAL OSCILLATOR

SG-8002CA series

- Wide frequency range from 1MHz to 125MHz.
- Quick delivery of samples and short lead time by mass production.
- Use of C-MOS IC assures low current consumption.
- Excellent shock resistance and environmental capability.
- Output enable function (OE) and stand-by function (ST) can be used for low current consumption applications.



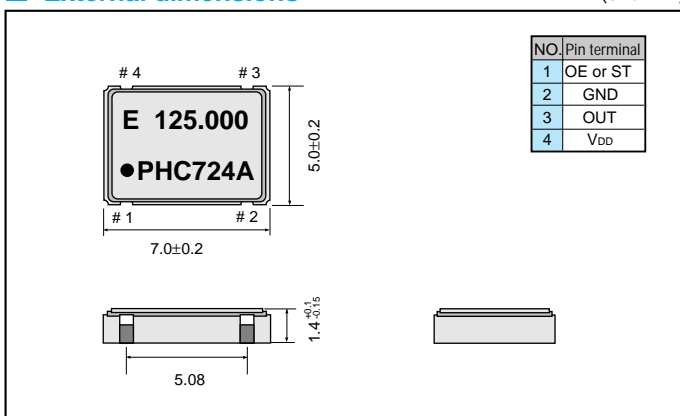
Specifications (characteristics)

Item	Symbol	PT/ST	Specifications			Remarks
			PH/SH	PC/SC		
Output frequency range	f_0		1.0000 MHz to 125.0000 MHz	1.0000 MHz to 90.0000 MHz		
Power source voltage	Max. supply voltage	V_{DD-GND}	-0.5V to +7.0V			
	Operating voltage	V_{DD}	5.0V±0.5V	2.7V to 3.6V		
Temperature range	Storage temperature	T_{STG}	-55°C to +125°C			
	Operating temperature	T_{OPR}	-20°C to +70°C (-40°C to +85°C)	-40°C to +85°C	Operating voltage range	
Soldering condition	T_{SOL}		Twice at under 260°C within 10 sec. or under 230°C within 3 min.			
Frequency stability	$\Delta f/f_0$		B: ±50ppm C: ±100ppm M: ±100ppm(-40°C to +85°C)		-20°C to +70°C	
Current consumption	I_{OP}		45mA max.	25mA max.	No load condition, Max. frequency range	
Output disable current	I_{OE}		30mA max.	15mA max.	OE=GND	
Standby current	I_{ST}		50µA max.		ST=GND	
Duty	t_w/t			40% to 60%	C-MOS load: 1/2 V_{DD} level	
		40% to 60%			TTL load: 1.4V level	
High output voltage	V_{OH}		V_{DD} -0.4V min.		I_{OH} =-16mA(PT/ST,PH/SH), -8mA(PC/SC)	
Low output voltage	V_{OL}		0.4V max.		I_{OL} = 16mA(PT/ST,PH/SH), 8mA(PC/SC)	
Output load condition (fan out)	TTL	N	5TTL max.		Max. frequency and max. operating voltage range	
	C-MOS	C_L	15pF max.	25pF max.		
Output enable/disable input voltage	V_{IH}		2.0v min.	$0.7 \times V_{DD}$ min.	\overline{ST} , OE terminal	
	V_{IL}		0.8V max.	$0.2 \times V_{DD}$ max.		
Output rise time	C-MOS level	t_{TLH}		4ns max.	C-MOS load: 20%→80% V_{DD}	
	TTL level		4ns max.		TTL load: 0.4V→2.4V	
Output fall time	C-MOS level	t_{THL}		4ns max.	C-MOS load: 80%→20% V_{DD}	
	TTL level		4ns max.		TTL load: 2.4V→0.4V	
Oscillation start up time	t_{OSC}		10ms max.		Time at Operating voltage to be 0 sec.	
Aging	f_a		±5ppm/year max.		T_a = 25°C, V_{DD} = 5.0V/3.3V(PC/SC)	
Shock resistance	S.R.		±20ppm max.		Three drops on a hard board from 75 cm or excitation test with 3000G x 0.3ms x 1/2sine wave in 3 directions	

Note: • Please contact us for inquiries about operating temperature(-40°C to +85°C), usagle frequencies, duty and output load conditions.

External dimensions

(Unit: mm)



Recommended soldering pattern

(Unit: mm)

