

## High-Frequency Crystal Oscillator

**SG - 750CE series****Preliminary**

- 3.2mm x 2.5mm Ceramic package with 1.0mm thickness.
- Reflowable and high density mounting type SMD package .
- Operable 2.7V to 5.5V and Output frequency range from 1.0 MHz to 41 MHz
- Output enable(OE : P type) or Standby (ST : S type) function allow more low current consumption.

## Specifications

## 1. Absolute Maximum Ratings

Item	Symbol	PT	PH	SH	Remarks
Storage Temperature	TSTG	- 55 to 125°C			Stored as bare product
Maximum supply voltage	VDD	- 0.5 to 7.0V			
Maximum input voltage	VIN	- 0.5 to VDD+0.5V			
Soldering condition	TSOL	Twice at under 260°C within 10sec.			

## 2. Operating Conditions

Item	Symbol	PT	PH	SH	Remarks
Operating Temperature	TOPR	- 20 to +70°C			
Operating voltage	VDD	4.5 to 5.5V	2.7 to 5.5V		
Input voltage	VIH	0 to VDD V			
Output load condition	CL	5TTL max.	30 pF max.		

## 3. Frequency Characteristics

Item	Symbol	PT	PH	SH	Remarks
Output frequency range*	f <sub>0</sub>	1.0 to 41 MHz			
Frequency stability	f / f <sub>0</sub>	B : ± 50 ppm C : ± 100 ppm			
Aging	f <sub>a</sub>	± 5ppm max.			Ta=+25°C, 1 <sup>st</sup> year

\*Note :

Please contact to EPSON about Standard Frequency.

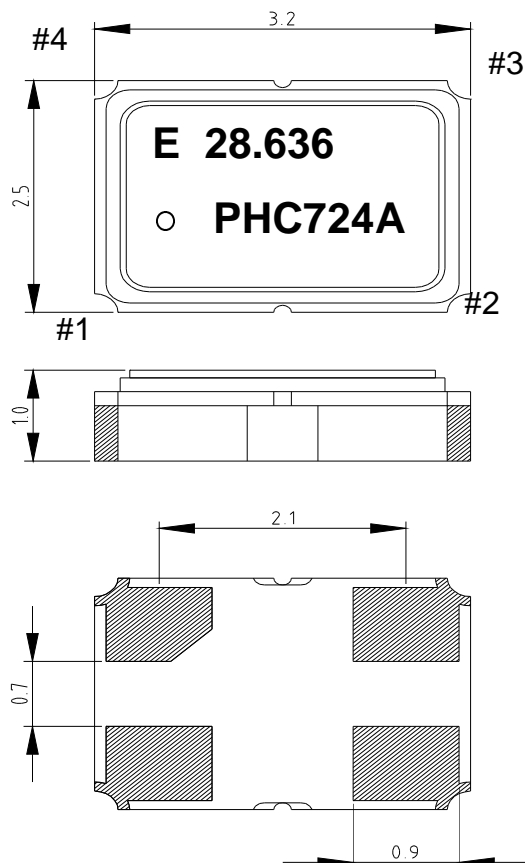
## 4.Characteristics

Item	Symbol	PT	PH	SH	Remarks
Current consumption	IDD1	45 mA max.		28 mA max.	
Disable current	IDD2	30 mA max.		□	
Standby current	IDD3	□		50 μA max.	
OE or ST input voltage	V <sub>IH</sub>	2.0V min.		70%V <sub>DD</sub>	
	V <sub>IL</sub>	0.8V max.		30%V <sub>DD</sub>	
OE or ST input current	I <sub>IH</sub>	10 μA max.			OE or ST = V <sub>DD</sub>
	I <sub>IL</sub>	10 μA max.			OE or ST =GND
Duty	tw / t	40 ~ 60%	□		1.4V level, CL=5TTL
		□	40 ~ 60%		50%V <sub>DD</sub> , CL=15pF
Output voltage	V <sub>OH</sub>	4.0V min.			V <sub>DD</sub> =4.5 to 5.5V, I <sub>OH</sub> = -16mA
				2.2V min.	V <sub>DD</sub> =2.7to 3.3V, I <sub>OH</sub> = -8mA
	V <sub>OL</sub>	0.4V max.			V <sub>DD</sub> =4.5 to 5.5V, I <sub>OH</sub> = +16mA
				0.4V max.	V <sub>DD</sub> =2.7 to 3.3V, I <sub>OH</sub> = +8mA
Output rise time	TTL	tr	7.0 ns max.	□	0.4V to 2.4V , CL= 5TTL
	C-MOS		□	7.0 ns max.	
Output fall time	TTL	tf	7.0 ns max.	□	2.4V to 0.4V , CL = 5TTL
	C-MOS		□	7.0 ns max.	
Oscillation start up time	tOSC	10 ms max.			

\*\*Note :

Output wave form is not compatible with C-MOS level and TTL level.

## 5. External Dimensions ( Unit : mm )



No.	Pin terminal
1	OE or ST
2	GND
3	OUT
4	VDD