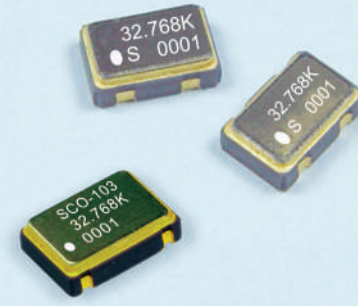


# CERAMIC SMD TYPE 32.768kHz(SCO-53, SCO-10)

- Ceramic SMD package
- 1.5/1.8/2.5/3.3 supply voltage
- AT-cut crystal used divided by 512
- CMOS output
- Stability up to  $\pm 20$ ppm
- Tri-state function available
- Reflow soldering is possible
- Available on tape and reel



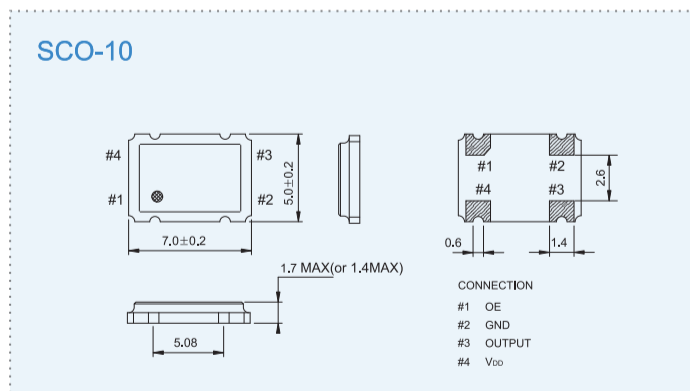
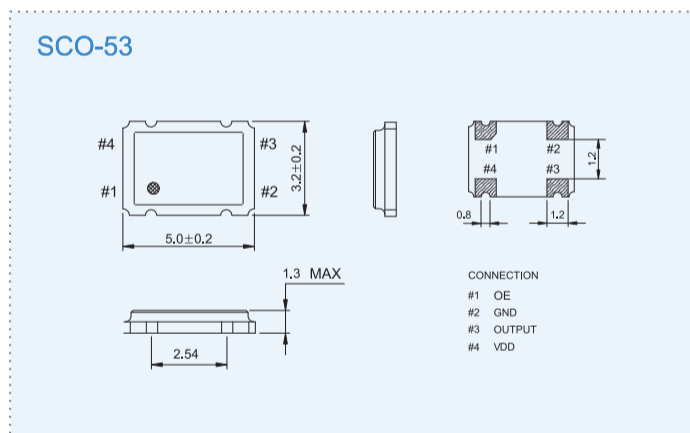
## ELECTRICAL SPECIFICATIONS

Frequency	32.768kHz	
Operating Temperature Range	$\pm 100$ ppm, $\pm 50$ ppm, $\pm 25$ ppm 0 to +70°C or -40 to +85°C	
Storage Temperature Range	-55 to +125°C	
Frequency Tolerance/Stability	Inclusive of operating temperature range, supply voltage and load	$\pm 20$ ppm
Supply Volatage(V <sub>DD</sub> )	3.3, 2.5, 1.8, 1.5V <sub>DC</sub> $\pm 10\%$	
Input Current	1mA max(typ. 0.4mA 3.3V)	
Output Voltage Logic High(V <sub>OH</sub> )	V <sub>DD</sub> -0.4V min	
Output Voltage Logic Low(V <sub>OL</sub> )	0.4V max	
Rise / Fall Time	1 $\mu$ s max.(typ. 0.2 $\mu$ s)	
Duty Cycle	50 $\pm$ 5% max	
Output Enable Function	V <sub>IH</sub> : $\geq 0.7V_{DD}$ V <sub>IL</sub> : $\leq 0.3V_{DD}$	Output Enable Output Disable : High Impedance
Aging(at 25°C)	$\pm 3$ ppm/year Max	
Start-up time	3msec Max(typ. 0.2msec)	

## Part Numbering Guide

MODEL (PKG TYPE)	SUPPLY VOLTAGE	FREQUENCY STABILITY	OPER-TEMP RANGE	DUTY CYCLE	1PIN CONNECTION	PACKING	FREQUENCY (MHZ)
SCO10 SCO53	5 : 5.0V 3 : 3.3V 2 : 2.5V 1 : 1.8V	20 : $\pm 20$ ppm 25 : $\pm 25$ ppm 50 : $\pm 50$ ppm BLANK : $\pm 100$ ppm *20 : ONLY $\pm 50$ ppm	A : -40 ~ +85°C B : -20 ~ +70°C BLANK : 0 ~ +70°C	D : 45 : 55 BLANK : 40 : 60	S : TRI-STATE H : E/D HIGH L : E/D LOW BLANK : NO-CONNECTION	BLANK : BULK : R : TAPE & REEL	xx.xxx(STD) xx.xxxxx

## MECHANICAL DIMENSIONS (mm)



## LAND PATTERN (mm)

