SiT8002
Programmable Oscillator

3.3V CMOS 2.5 x 2.0 x 0.85

Features

- 1 MHz to 125 MHz Frequency range
- Meets or Exceeds performance of Epson SG-8002 family
- Consumer electronics, Automation
- · Greater immunity from interference and ultra-reliable start up
- Output driver strength reduces EMI
- · RoHs compliant and lead-free
- Ultra short lead time
 - These highly reliable oscillators are completely quartz free

Specifications

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Parameter	Symbol	Min.	Тур.	Max.	Unit	Condition
Output Frequency Range	f	1	-	125	MHz	
		-50	-	+50	ppm	Inclusive of: Initial tolerance, operating temperature, rated power supply voltage change, load change, aging, shock and
Frequency Tolerance	F_tol	-100	-	+100	ppm	vibration
Storage Temperature Range		-55	-	+125	°C	
		-20	-	+70	°C	Extended Commercial
Operating Temperature Range	T_use	-40	-	+85	°C	Industrial
Supply Voltage	Vdd	2.97	-	3.63	V	
Current Consumption	ldd	-	-	22	mA	15pf load, f = 65 MHz
Standby Current	I_std	I	-	50	μΑ	output is Weakly Pulled Down, $\overline{ST} = GND$
Symmetry	SYM	45	-	55	%	f = 1 MHz - 125 MHz, 15pf load
Rise/Fall Time	Tr, Tf	-	1.0	2	ns	20% - 80% Vdd level
Output Voltage High	VOH	90	-	-	%Vdd	IOH = -9mA
Output Voltage Low	VOL	I	-	10	%Vdd	IOL = 9mA
Input Voltage High	VIH	70	-	-	%vdd	Pin 1, OE or ST
Input Voltage Low	VIL	I	-	30	%vdd	Pin 1, OE or ST
Output Load	L_cmos	I	-	15	pF	
Start up Time	T_osc	-	12	50	ms	Time from minimum Vdd
		-	-	±98	ps	f = 24 MHz
Peak-peak Period Jitter	T_pk	-	_	±60	ps	f = 100 MHz

Dimensions and Land Pattern



Part No. Guide- How to Order



www.sitime.com

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"This product and/or this method of use is protected by one or more of the following patent(s): US 7,7075,160, U 6,987,432, US 7,071,793, US 7,202,761, US 6,936,491, US 7,068,125, US 6,952,041, US 7,115,436, US 6,995,622, US 7,224,236, US 7,221,230, US 7,102,467, US 7,221,241, US 7,205,867, US 7,227,432, US 6,939,809, US 7,172,917, US6,936,902, US 5,683,591, US 7,041,225, US 7,259,436, US 6,808,953. Other US and foreign patents pending.

