

SiT9386A-B220001

50 MHz, ± 25 ppm MEMS XO for Quanta Computers

PRELIMINARY



Description

The SiT9386A-B220001 is a 3.3V LVDS XO with ± 25 ppm stability in a 3.2x2.5 mm² QFN package, optimized for use in Nvidia Pegasus automotive platforms.

Utilizing SiTime's unique DualMEMS™ temperature sensing and TurboCompensation™ technology, the SiT9386 delivers exceptional dynamic performance by providing resistance to airflow, thermal gradients, shock and vibration. This device also integrates multiple on-chip regulators to filter power supply noise, eliminating the need for a dedicated external LDO.

Refer to the SiT9386 datasheet, reliability report and composition report for all other device specifications, quality, and environmental information.

Features

- Operating mode: XO
- Frequency: 50 MHz
- Frequency stability: ± 25 ppm
- Operating temperature range: -40 to 85 °C
- Power supply voltage: 3.3V
- LVDS output
- No activity dips or micro jumps
- Exceptional dynamic stability under airflow and rapid temperature changes
- Integrated regulators for on-chip power-supply noise filtering and excellent PSNR
- Resistant to shock, vibration and board bending
- 3.2 x 2.5 mm² industry-standard package

Ordering Information

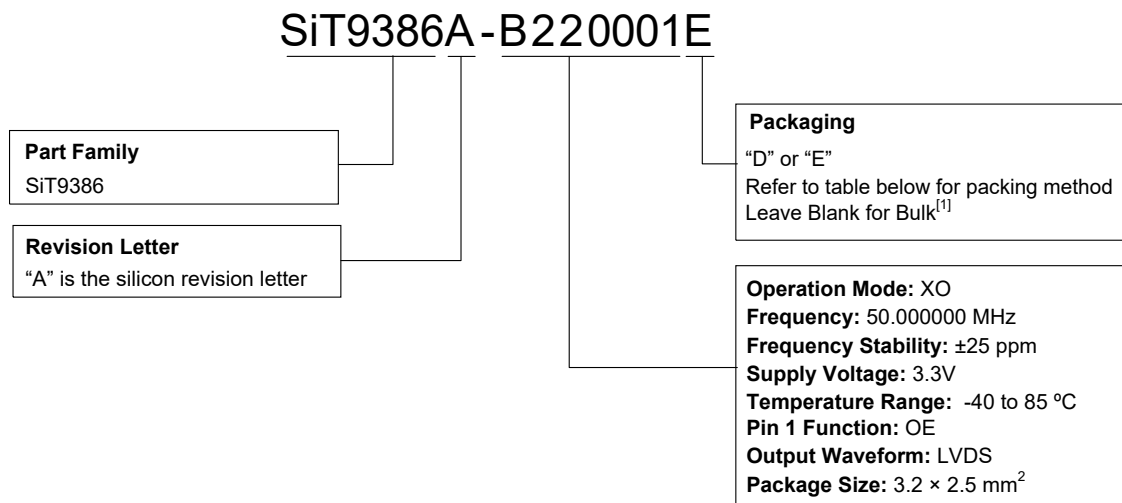


Figure 1. Order codes

Notes:

1. Bulk is available for sampling only.

Table 1. Ordering Codes for Supported Tape & Reel Packing Method

Device Size (mm x mm)	8 mm T&R (3ku)	8 mm T&R (1ku)
3.2 x 2.5	D	E

Table 2. Electrical Characteristics^[2]

Parameters	Symbol	Min.	Typ.	Max.	Unit	Condition
Frequency Coverage						
Output Frequency Range	F		50.000000		MHz	
Frequency Stability						
Frequency Stability	F_stab	-25	–	+25	ppm	Inclusive of initial tolerance, operating temperature, rated power supply voltage and load variations
Supply Voltage						
Supply Voltage	V _{DD}	2.97	3.3	3.63	V	
Temperature Range						
Operating Temperature Range	T_use	-40	–	85	°C	Ambient temperature

Note:

- Refer to SiT9386 standard datasheet for all other specifications.

Revision History

Table 3. Revision History

Version	Release Date	Change Summary
0.80	10/09/2019	Preliminary release
0.81	01/12/2020	Revised part number

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