

Product Overview

N34TS04: EEPROM Digital Output Temperature Sensor with On-board SPD

For complete documentation, see the data sheet.

The N34TS04 is a combination Temperature Sensor (TS) and 4-Kb of Serial Presence Detect (SPD) EEPROM, which implements the JEDEC TSE2004av DDR4 specification. The TS measures temperature at least 10 times every second. Temperature readings can be retrieved by the host via the serial interface, and are compared to high, low and critical trigger limits stored into internal registers. Over or under limit conditions can be signaled on the open-drain EVENT pin. The 4-Kb memory is partitioned into two individually addressable 2-Kb banks (referred to as SPD pages in the TSE2004av specification). Each bank contains two 1-Kb blocks, which can be Write Protected via Reversible Software Write Protect (RSWP) commands. The SPD EEPROM features a 16-byte wide write buffer and supports the Standard (100 kHz), Fast (400 kHz) and Fast Plus (1 MHz) I2C protocols.

Features

- JEDEC TSE2004av Compliant Temperature Sensor
- Temperature Range: -20°C to 125°C
- DDR4 DIMM Compliant SPD EEPROM
- Supply Range: 1.7 V - 5.5 V (SPD EEPROM) and 2.2 V - 5.5 V (TS)
- I2C / SMBus Interface
- Schmitt Triggers and Noise Suppression Filters on SCL and SDA Inputs
- 16-Byte Page Write Buffer
- Low Power CMOS Technology
- 2 x 3 x 0.75 mm TDFN Package and 2 x 3 x 0.5 mm UDFN Package

Applications

- Thermal Management and SPD for DDR4 Memory Modules

End Products

- High-speed PCs, laptops, DDR4
- Graphics cards
- Telecom equipment & base stations
- Environmental control systems
- Process control equipment

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Type	Density	Organization	Data Transmission Standard	f _{cycle} Max (kHz)	t _{acc} Max ns	V _{CC} Min (V)	V _{CC} Max (V)	I _{standby} Max (μA)	I _{act} Max (mA)	T Min (°C)	T Max (°C)	Package Type
N34TS04MT3ETG	0.8	Pb-free Halide free non AEC-Q and PPAP	Active	Serial	4 kb	512 x 8	I2C	1000	300	1.7	5.5	10	1	-40	125	TDF N-8
N34TS04MU3ETG	0.8	Pb-free Halide free non AEC-Q and PPAP	Active	Serial	4 kb	512 x 8	I2C	1000	300	1.7	5.5	10	1	-40	125	UDFN-8

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