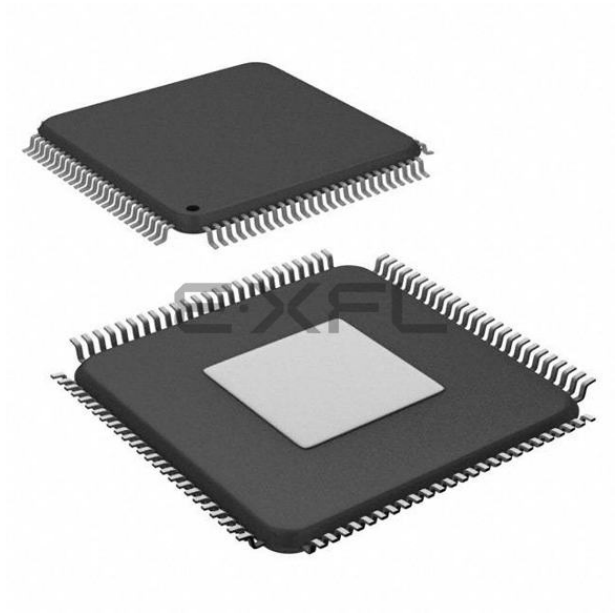
Infineon Technologies - SAK-XC2265N-40F80L Datasheet



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What is "Embedded - Microcontrollers"?

"Embedded - Microcontrollers" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" because they are embedded within electronic devices to control various functions, rather than serving as standalone computers. Microcontrollers are crucial in modern electronics, providing the intelligence and control needed for a wide range of applications.

Applications of "Embedded - Microcontrollers"

Details	
Product Status	Obsolete
Core Processor	C166SV2
Core Size	16/32-Bit
Speed	80MHz
Connectivity	CANbus, EBI/EMI, I²C, LINbus, SPI, SSC, UART/USART, USI
Peripherals	I²S, POR, PWM, WDT
Number of I/O	76
Program Memory Size	320KB (320K x 8)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	42K x 8
Voltage - Supply (Vcc/Vdd)	3V ~ 5.5V
Data Converters	A/D 16x10b
Oscillator Type	Internal
Operating Temperature	-40°C ~ 125°C (TA)
Mounting Type	Surface Mount
Package / Case	100-LQFP Exposed Pad
Supplier Device Package	PG-LQFP-100-8
Purchase URL	https://www.e-xfl.com/product-detail/infineon-technologies/sak-xc2265n-40f80l

4.7.6 Synchronous Serial Interface Timing

The following parameters are applicable for a USIC channel operated in SSC mode.

Note: These parameters are not subject to production test but verified by design and/or characterization.

Note: Operating Conditions apply.

Table 34 is valid under the following conditions: C_L= 20 pF; SSC= master ; voltage_range= upper

Table 34 USIC SSC Master Mode Timing for Upper Voltage Range

Parameter	Symbol	Values			Unit	Note / Test Condition
		Min.	Typ.	Max.		
Slave select output SELO active to first SCLKOUT transmit edge	t_1 CC	t_{SYS} - 8[1)]			ns	
Slave select output SELO						

1) $t_{SYS} = 1 / f_{SYS}$

Table 35 is valid under the following conditions: C_L= 20 pF; SSC= master ; voltage_range= lower

5.3 Quality Declarations

The operation lifetime of the XC226xN depends on the applied temperature profile in the application. For a typical example, please refer to Table 44; for other profiles, please contact your Infineon counterpart to calculate the specific lifetime within your application.

Table 43 Quality Parameters

Parameter	Symbol	Values			Unit	Note / Test Condition
		Min.	Typ.	Max.		
Operation lifetime	t_{OP} CC			20	a	See Table 44 and Table 45
ESD susceptibility according to Human Body Model (HBM)	V_{HBM} SR			2 000	V	EIA/JESD22-A114-B
Moisture sensitivity level	MSL CC			3		JEDEC J-STD-020C

Table 44 Typical Usage Temperature Profile

Operating Time (Sum = 20 years)	Operating Temperat.	Notes
1 200 h	T_J = 150°C	Normal operation
3 600 h	T_J = 125°C	Normal operation
7 200 h	T_J = 110°C	Normal operation
12 000 h	T_J = 100°C	Normal operation
7 u21 600 h	T_J = 0 }10°C, }, 60 }70°C	Power reduction

Table 45 Long Time Storage Temperature Profile

Operating Time (Sum = 20 years)	Operating Temperat.	Notes
2 000 h	T_J = 150°C	Normal operation
16 000 h	T_J = 125°C	Normal operation
6 000 h	T_J = 110°C	Normal operation
151 200 h	T_J d150°C	No operation