NXP USA Inc. - DSP56F803BU80 Datasheet

Welcome to E-XFL.COM

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	56800
Core Size	16-Bit
Speed	80MHz
Connectivity	CANbus, EBI/EMI, SCI, SPI
Peripherals	POR, PWM, WDT
Number of I/O	16
Program Memory Size	64KB (32K x 16)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	2K x 16
Voltage - Supply (Vcc/Vdd)	3V ~ 3.6V
Data Converters	A/D 8x12b
Oscillator Type	External
Operating Temperature	-40°C ~ 85°C (TA)
Mounting Type	Surface Mount
Package / Case	100-LQFP
Supplier Device Package	100-LQFP (14x14)
Purchase URL	https://www.e-xfl.com/product-detail/nxp-semiconductors/dsp56f803bu80

Email: info@E-XFL.COM

Address: Room A, 16/F, Full Win Commercial Centre, 573 Nathan Road, Mongkok, Hong Kong

Freescale Semiconductor, Inc.
Datasheet Addendum

Document Number: DSP56F803AD
Rev. 0, 10/2015

Addendum to Rev. 16 of the 56F803 datasheet

This addendum identifies changes to Rev.16 of the 56F803 datasheet. The changes described in this addendum have not been implemented in the specified pages.

1 Update the incomplete Thermal Design Considerations section

Location:	Section 5.1, Page 51

Thermal Considerations section in 56F803 datasheet Rev.16 is incomplete. The complete Thermal Design Consideration section should be as follows:

An estimation of the chip junction temperature, T_J, in °C can be obtained from the equation:

$$T_J = T_A + (P_D \times R_{\theta JA}) \qquad \textit{Eqn. 1}$$

where:

T_A = ambient temperature °C

$R_{\theta JA}$ = package junction-to-ambient thermal resistance °C/W

P_D = power dissipation in package

Historically, thermal resistance has been expressed as the sum of a junction-to-case thermal resistance and a case-to-ambient thermal resistance:

$$R_{\theta JA} = R_{\theta JC} + R_{\theta CA} \qquad \textit{Eqn. 2}$$