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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	Active
Core Processor	STM8
Core Size	8-Bit
Speed	16MHz
Connectivity	I ² C, IrDA, SPI, UART/USART
Peripherals	Brown-out Detect/Reset, DMA, IR, POR, PWM, WDT
Number of I/O	30
Program Memory Size	4KB (4K x 8)
Program Memory Type	FLASH
EEPROM Size	256 x 8
RAM Size	1K x 8
Voltage - Supply (Vcc/Vdd)	1.8V ~ 3.6V
Data Converters	A/D 23x12b
Oscillator Type	Internal
Operating Temperature	-40°C ~ 85°C (TA)
Mounting Type	Surface Mount
Package / Case	32-UFQFN Exposed Pad
Supplier Device Package	32-UFQFPN (5x5)
Purchase URL	https://www.e-xfl.com/product-detail/stmicroelectronics/stm8l151k2u6

APPLICABLE STANDARD				
RATING	OPERATING TEMPERATURE RANGE	-35°C TO +85°C (NOTES 1)	STORAGE TEMPERATURE RANGE	-10°C TO +60°C (NOTE3)
	OPERATING HUMIDITY RANGE	20 % TO 80 % (NOTES 2)	STORAGE HUMIDITY RANGE	40 % TO 70 % (NOTE3)
	VOLTAGE	150 V AC (DC)	CURRENT	1 A
	APPLICABLE CONNECTOR	DF13-*S-1.25C	APPLICABLE CONTACT	DF13(G)-2630SCF DF13-3032SCF

SPECIFICATIONS

ITEM	TEST METHOD	REQUIREMENTS	QT	AT
CONSTRUCTION				
GENERAL EXAMINATION	VISUALLY AND BY MEASURING INSTRUMENT.	ACCORDING TO DRAWING.	X	X
MARKING	CONFIRMED VISUALLY.		X	X
ELECTRIC CHARACTERISTICS				
CONTACT RESISTANCE	100 m A (DC OR 1000 Hz).	30 mΩ MAX.	X	-
INSULATION RESISTANCE	100 V DC.	500 MΩ MIN.	X	-
VOLTAGE PROOF	500 V AC FOR 1 min.	NO FLASHOVER OR BREAKDOWN.	X	-
MECHANICAL CHARACTERISTICS				
MECHANICAL OPERATION	30 TIMES INSERTIONS AND EXTRACTIONS.	① CONTACT RESISTANCE: 30 mΩ MAX. ② NO DAMAGE, CRACK OR LOOSENESS OF PARTS.	X	-
VIBRATION	FREQUENCY 10 TO 55 Hz, SINGLE AMPLITUDE 0.75 mm, AT 2 h, FOR 3 DIRECTIONS.	① NO ELECTRICAL DISCONTINUITY OF 1μs. ② NO DAMAGE, CRACK OR LOOSENESS OF PARTS.	X	-
SHOCK	490 m/s ² DURATION OF PULSE 11 ms AT 3 TIMES FOR 3 DIRECTIONS.		X	-
ENVIRONMENTAL CHARACTERISTICS				
RAPID CHANGE OF TEMPERATURE	TEMPERATURE -55→ 15 TO 35→+85→ 15 TO 35 °C TIME 30→ 2 TO 3→30→ 2 TO 3 min. UNDER 5 CYCLES.	① CONTACT RESISTANCE: 30mΩ MAX. ② INSULATION RESISTANCE: 500 MΩ MIN. ③ NO DAMAGE, CRACK OR LOOSENESS OF PARTS.	X	-
DAMP HEAT (STEADY STATE)	EXPOSED AT 40 ± 2 °C, 90 TO 95 %, 96 h.		X	-
RESISTANCE TO SOLDERING HEAT	1) REFLOW SOLDERING «REFLOW AREA» 250°C MAX 10 sec MAX 230°C MIN 60 sec MAX «PREHEATING AREA» 170°C TO 190°C 60 sec TO 120 sec PUT THROUGH IN REFLOW FURNACE TWICE, LEAVE IN AMBIENT TEMPERATURE AND HUMIDITY FOR 1 HOUR. 2) MANUAL SOLDERING SOLDERING IRON TEMPERATURE :350°C, SOLDERING TIME : 3sec. NO STRENGTH ON CONTACT.	NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.	X	-
SOLDERABILITY	SOLDERED AT SOLDER TEMPERATURE, 245°C FOR INSERTION DURATION, 3sec.	SOLDER SHALL COVER A MINIMUM OF 95 % OF THE SURFACE BEING IMMERSSED.	X	-

REMARKS

NOTE1: INCLUDE THE TEMPERATURE RISING BY CURRENT

NOTE2:NO CONDENSING

NOTE3:APPLY TO THE CONDITION OF LONG TERM STORAGE FOR UNUSED PRODUCTS BEFORE PCB ON BOARD,

AFTER PCB BOARD , OPERATING TEMPERATURE AND HUMIDITY RANGE IS APPLIED FOR INTERIM STORAGE DURING TRANSPORTATION.

Unless otherwise specified, refer to JIS C 5402.

COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
△				
		APPROVED	TS. SAKATA	09. 11. 04
		CHECKED	TS. FUKUSHIMA	09. 11. 04
		DESIGNED	KT. ISHII	09. 11. 01
		DRAWN	KT. ISHII	09. 11. 01
Note QT:Qualification Test AT:Assurance Test X:Applicable Test		DRAWING NO.		ELC4-083672-05
HRS	SPECIFICATION SHEET		PART NO.	DF13C-*P-1. 25V (21)
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL536 △ 1/1