



HE83143 APPROVAL AND TOOLING FORM

DATE: _____

COMPANY NAME: _____
 PART NUMBER: HE83143
 PROJECT NAME: _____
 CODE NUMBER: HE83143-
 PRODUCTION NUMBER _____ (by King Billion)

PRODUCTION INFORMATION:

Package Type:	<input type="checkbox"/> Package Form (_____)	<input type="checkbox"/> Chip Form
Ink:	Line one – _____	
	Line two – _____	
	Line three – _____	
Remark:	_____	

CODE INFORMATIN:

File Name: _____
Check Sum: _____
File Size: _____

DEVICE OPTION:

Operation Voltage: Two-Battery Three-Battery Other(_____)

Mask Options:

Name	Description	Configuration
MO_PORE	Internal Power On Reset	<input type="checkbox"/> Disable (0) <input type="checkbox"/> Enable (1)
MO_FCK MO_SCKN	Clock Mode Select	<input type="checkbox"/> Slow Only (00) <input type="checkbox"/> Dual Clock (10) <input type="checkbox"/> Fast Only (11)
MO_FXTAL	Osc. Type of Fast Clock	<input type="checkbox"/> RC (0) <input type="checkbox"/> X'TAL (1)
MO_SXTAL	Osc. Type of Slow Clock	<input type="checkbox"/> RC (0) <input type="checkbox"/> X'TAL (1)
MO_WDTE	Watch Dog Timer	<input type="checkbox"/> Disable (0) <input type="checkbox"/> Enable (1)
MO_FOSCE	Fast Clock Source Select	<input type="checkbox"/> Internal (0) <input type="checkbox"/> External (1)
MO_FRCS[2.0]	Internal Fast Clock Rate Select (If internal clock is selected.)	<input type="checkbox"/> ~990K Hz (000) <input type="checkbox"/> ~1.1M Hz (001) <input type="checkbox"/> ~1.3M Hz (010) <input type="checkbox"/> ~1.6M Hz (011) <input type="checkbox"/> ~2M Hz (100) <input type="checkbox"/> ~2.6M Hz (101) <input type="checkbox"/> ~3.9M Hz (110) <input type="checkbox"/> ~6.5M Hz (111)



Name	Description	Configuration	
MO_DTMF	DTMF Clock Source Select	<input type="checkbox"/> 3.58MHz	<input type="checkbox"/> 32.768MHz
MO_LCDBS[2.0]	LCD bias resistor	<input type="checkbox"/> R=30K (000) <input type="checkbox"/> R=90K (010) <input type="checkbox"/> R=210K (100) <input type="checkbox"/> R=270K (110)	<input type="checkbox"/> R=60K (001) <input type="checkbox"/> R=120K (011) <input type="checkbox"/> R=240K (101) <input type="checkbox"/> R=300K (111)

Name	Description	Configuration	
MO_CPP[0]	PRTC[0] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_CPP[1]	PRTC[1] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_CPP[2]	PRTC[2] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_CPP[3]	PRTC[3] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_CPP[4]	PRTC[4] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_CPP[5]	PRTC[5] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_CPP[6]	PRTC[6] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_CPP[7]	PRTC[7] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_DPP[0]	PRTD[0] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_DPP[1]	PRTD[1] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_DPP[2]	PRTD[2] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_DPP[3]	PRTD[3] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_DPP[4]	PRTD[4] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_DPP[5]	PRTD[5] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_DPP[6]	PRTD[6] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_DPP[7]	PRTD[7] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_14PP[0]	PRT14[0] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_14PP[1]	PRT14[1] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_14PP[2]	PRT14[2] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_14PP[3]	PRT14[3] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_14PP[4]	PRT14[4] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_14PP[5]	PRT14[5] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_14PP[6]	PRT14[6] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_14PP[7]	PRT14[7] Output Type	<input type="checkbox"/> Open-drain (0)	<input type="checkbox"/> Push-pull (1)
MO_LIO14[0]	PRT14[0] Pin Function	<input type="checkbox"/> I/O (0)	<input type="checkbox"/> LCD (1)
MO_LIO14[1]	PRT14[1] Pin Function	<input type="checkbox"/> I/O (0)	<input type="checkbox"/> LCD (1)
MO_LIO14[2]	PRT14[2] Pin Function	<input type="checkbox"/> I/O (0)	<input type="checkbox"/> LCD (1)
MO_LIO14[3]	PRT14[3] Pin Function	<input type="checkbox"/> I/O (0)	<input type="checkbox"/> LCD (1)
MO_LIO14[4]	PRT14[4] Pin Function	<input type="checkbox"/> I/O (0)	<input type="checkbox"/> LCD (1)
MO_LIO14[5]	PRT14[5] Pin Function	<input type="checkbox"/> I/O (0)	<input type="checkbox"/> LCD (1)
MO_LIO14[6]	PRT14[6] Pin Function	<input type="checkbox"/> I/O (0)	<input type="checkbox"/> LCD (1)
MO_LIO14[7]	PRT14[7] Pin Function	<input type="checkbox"/> I/O (0)	<input type="checkbox"/> LCD (1)

NOTE:

For those bodies with data ROM, the order of updating TP must be TPP first, then TPH, then TPL, so that data ROM can be properly pre-charged. After updating TPL, there must be at least 5us of waiting time before reading the data (by LDV), otherwise the read operation is corrupted. This order issue and waiting delay issue CAN NOT be emulated by ICE.

NOTE:

TP will increase by 1 automatically while executing LDV instruction. This feature can only be emulated by ICE3.0 or later version.

NOTE:

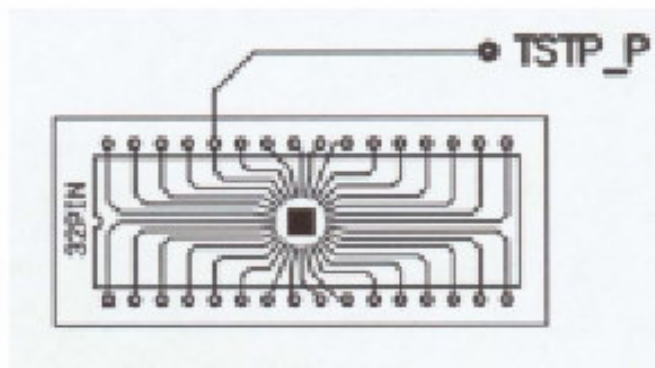
The CPU clock rate at SLOW mode is SXO frequency times 2. That is, if you use a 32k crystal oscillator as slow clock source, the CPU clock rate is in fact 64k Hz. This feature can only be emulated by ICE3.1G or later version. In ICE3.1, the CPU clock rate at SLOW mode is equal to SXO frequency.

NOTE:

LCD driving circuit must be turned off before IC goes into sleep mode.

NOTE

Please bond TSTP_P on PCB with test point so that TSTP_P pin can be probed or be forced to VDD. In this way, KB can test the IC on PCB. It can help much in troubleshooting. Neither VDD nor GND connection is necessary for TSTP_P. The following figure is an example (Testing point with through hole).





DEVICE USAGE CHECK: (for double check purpose only)

Clock Mode:	<input type="checkbox"/> Dual	<input type="checkbox"/> Fast	<input type="checkbox"/> Slow	<input type="checkbox"/> Idle	<input type="checkbox"/> Sleep
Reset Usage:	<input type="checkbox"/> External	<input type="checkbox"/> Internal			
Watch Dog Timer Usage:	<input type="checkbox"/> WDT				
I/O Usage:	_____Input, _____Output, _____Bi-directional				
RAM Usage:	Total_____Byte is used.				
ROM Usage:	Total_____KB is used,_____KB is utilized as program ROM.				
Timer Usage:	<input type="checkbox"/> Timer I	<input type="checkbox"/> Timer II	<input type="checkbox"/> Time-base		
LCD Usage:	_____COM,_____SEG				
Speech Usage:	<input type="checkbox"/> PWM Output	<input type="checkbox"/> D/A Output			
OPAMP Usage:	<input type="checkbox"/> As comparator	<input type="checkbox"/> As POAMP			

APPROVED BY: ICE3.1G ROMLESS DEMOBOARD OTHER(_____)

COMMENTS:

CUSTOMER APPROVAL BY:	K.B. CONFIRMATION BY:
SIGNATURE: _____	SIGNATURE: _____
PRINTED NAME: _____	PRINTED NAME: _____
TITLE: _____	TITLE: _____