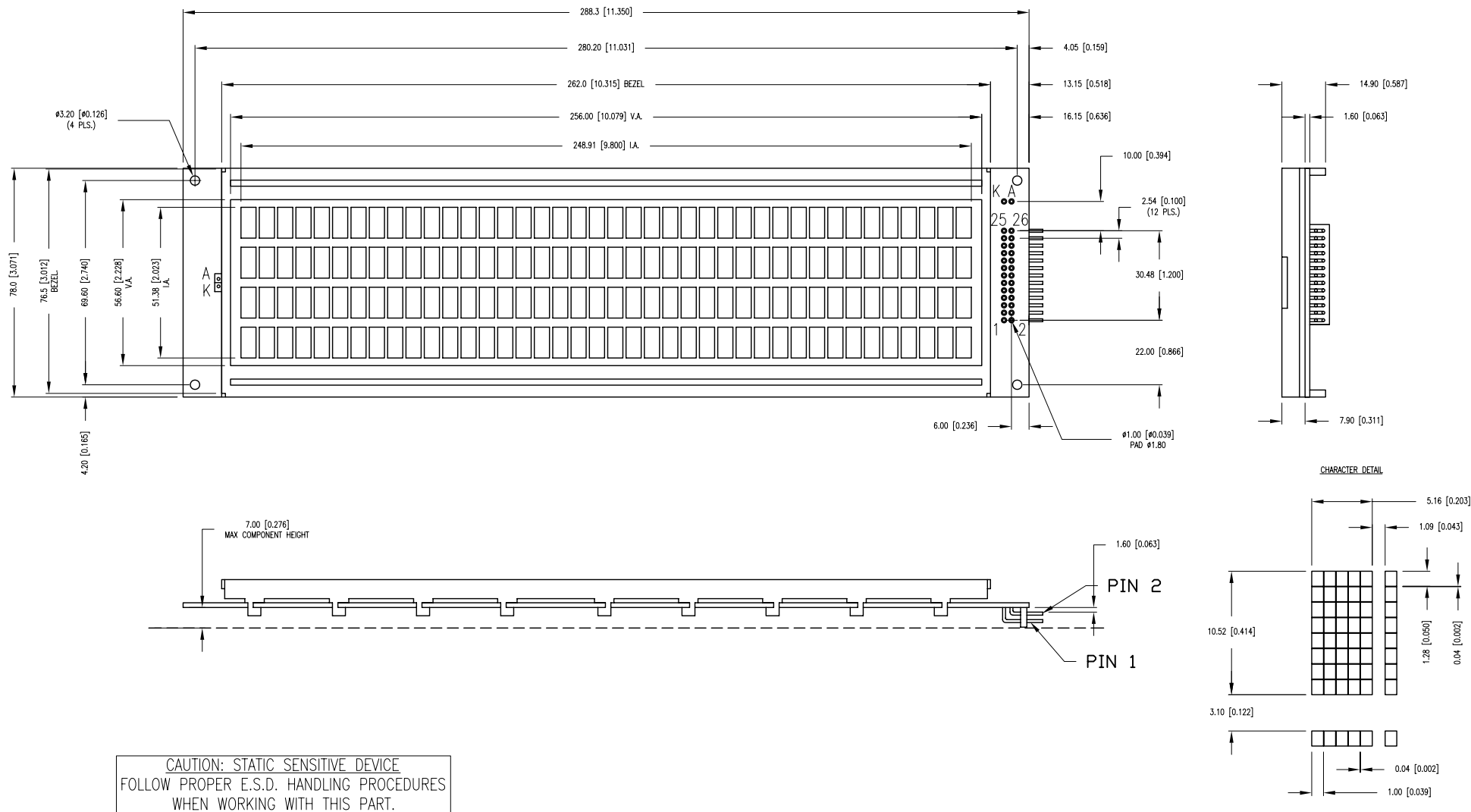


PART NUMBER	LCM-H04004DSR/F2T	REV.	B
DATE	E.C.N. NUMBER AND REVISION COMMENTS		REV.
04.19.07	E.C.N. #11148.		A
05.21.12	E.C.N. #10BRDR. & REDRAWN.		B



*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN.= +DECIMAL PRECISION MAX.= +0.00 -DECIMAL PRECISION

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10.52mm CHAR HEIGHT, 40x4 LCD, STN, 6:00 VIEW, TEMP. COMPENSATION CIRCUIT, NEGATIVE CHARGE PUMP.

THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.

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DATE:	05.21.12	DRAWN BY:	AB
PAGE:	1 OF 2	CHKD BY:	SS
SCALE:	NTS	APRVD BY:	SS
UNIT:	mm [INCH]		Ⓟ

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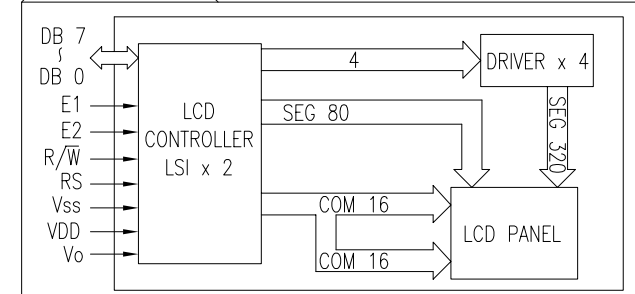
ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	$V_{DD}-V_{SS}$	$T_a=25^{\circ}\text{C}$	-0.3	7.0	V
SUPPLY VOLTAGE FOR LCD DRIVE	$V_{DD}-V_o$	-	-0.3	12.0	V
INPUT VOLTAGE	V_I	$T_a=25^{\circ}\text{C}$	-0.3	V_{DD}	V
OPERATING TEMPERATURE	T_{opr}	LCM-H	-20	70	$^{\circ}\text{C}$
STORAGE TEMPERATURE	T_{stg}	LCM-H	-30	85	$^{\circ}\text{C}$

PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION
1	A	-	BACKLIGHT ANODE
2	K	-	BACKLIGHT CATHODE
3	E2	-	ENABLE 2
4	V_o	-	CONTRAST ADJUSTMENT
5	R/W	H/L	H: DATA READ L: DATA WRITE
6	N/C	-	NO CONNECTION
7	RS	-	REGISTER SELECT
8	V_{SS}	-	GROUND
9	E1	-	ENABLE 1
10	V_{SS}	-	GROUND
11	DB0	-	DATA BIT
12	V_{SS}	-	GROUND
13	DB1	-	DATA BIT
14	V_{SS}	-	GROUND
15	DB2	-	DATA BIT
16	V_{SS}	-	GROUND
17	DB3	-	DATA BIT
18	V_{SS}	-	GROUND
19	DB4	-	DATA BIT
20	V_{SS}	-	GROUND
21	DB5	-	DATA BIT
22	V_{DD}	-	+5VDC- PARALLEL WITH PIN 24
23	DB6	-	DATA BIT
24	V_{DD}	-	+5VDC- PARALLEL WITH PIN 22
25	DB7	-	DATA BIT
26	N/C	-	NO CONNECTION

BLOCK DIAGRAM 40 x 4, 1/16 DUTY, 1/5 BIAS



ELECTRICAL CHARACTERISTICS

 $V_{DD}=4.5\text{V to }5.5\text{V}, T_A=25^{\circ}\text{C}$

ITEM			SYMBOL	CONDITION	STANDARD VALUE			UNIT
					MIN.	TYP.	MAX.	
SUPPLY VOLTAGE FOR LOGIC			$V_{DD}-V_{SS}$	—	4.5	5.0	5.5	V
SUPPLY CURRENT FOR LOGIC			I_{DD}	$V_{DD}=5V$	—	6.0	10.0	mA
INPUT VOLTAGE	HIGH		V_{IH}	—	2.2	—	V_{DD}	V
	LOW		V_{IL}	—	0	—	0.6	V
OUTPUT VOLTAGE	HIGH		V_{OH}	—	2.4	—	—	V
	LOW		V_{OL}	—	—	—	0.4	V
*LED BACKLIGHT	VOLTAGE		V_f	$I_f=780mA$	—	4.2	4.6	V
	CURRENT		I_f	—	—	780	1020	mA
	POWER CONSUMPTION		PD	—	—	3.3	5	W
	LUMINOUS		L	$I_f=780mA$	80	120	—	cd/m ²
	COLOR		—	—	—	—	—	nm

*ONLY APPLIES TO MODULES WITH BACKLIGHT

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