

Model	HNA-09SS92T	Rev. ② 29-Jan-2013
Application	AUDIO	
Color of Illumination #6)	GREEN (G. :x=0.250,y=0.439)	

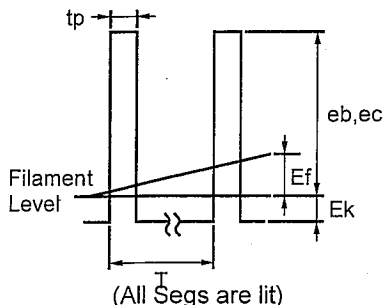
ABSOLUTE MAXIMUM RATINGS #4)

Item	Symbol	Min.	Max.	Unit	Condition
Filament Voltage #2)	Ef	—	3.60	Vdc	eb,ec = Typ.
Anode Voltage	eb	—	28.0	Vp-p	Ef=Typ.
Grid Voltage	ec	—	28.0	Vp-p	
Operating Temperature	Topr	-40	+85	°C	—

RECOMMENDED OPERATING CONDITION #5)

Item	Symbol	Min.	Typ.	Max.	Unit
Filament Voltage #2)	Ef	2.70	3.00	3.3	Vdc
Peak Anode Voltage	eb	22.0	24.0	26.0	Vp-p
Peak Grid Voltage	ec	22.0	24.0	26.0	Vp-p
Cut-Off Bias Voltage	Ek	2.0	—	—	Vdc
Duty Factor	Du	—	1/10	—	—
Pulse Width	tp	—	100	—	μs
Operating Temperature	Topr	-20	—	+70	°C
Storage Temperature	Tstg	-55	—	+85	°C

ELECTRICAL CHARACTERISTICS

Item	Test Condition	Symbol	Min.	Typ.	Max.	Unit	
Filament Current	Ef= 3.0 Vdc ,eb=ec=0	If	90	100	110	mAdc	
Anode Current #1)	Ef= 3.0 Vdc eb= 24.0 Vp-p ec= 24.0 Vp-p	ib	2G~9G	—	3.0	6.0	mAp-p
			1G	—	6.0	12.0	
Grid Current #1)	Duty= 1/10 tp= 100 μs tb= 0 μs	ic	2G~9G	—	4.0	8.0	mAp-p
			1G	—	5.0	10.0	
Brightness	 <p>(All Segs are lit)</p>	GREEN	102	204	—	ft-L	
		L(Max.) / L(Min.)	—	—	2		
Grid Cut-Off Voltage #3)	Ef= 3 Vdc, Eb= 24.0 Vdc, Ec=Vary	Ecco	(-2.0)	—	—	Vdc	
Anode Cut-Off Voltage #3)	Ef= 3 Vdc, Du= 1/10 ec= 24.0 Vp-p, Eb= Vary	Ebco	(-2.0)	—	—	Vdc	

#1. Unless otherwise specified, the anode and the grid current should be measured for each grid when all anodes turn on.

#2. DC driving voltage.

#3. The cut-off voltage measurement should be grounded at negative(-) side of the filament terminal.

#4. Absolute Maximum Ratings : The value should not be exceeded in any conditions.

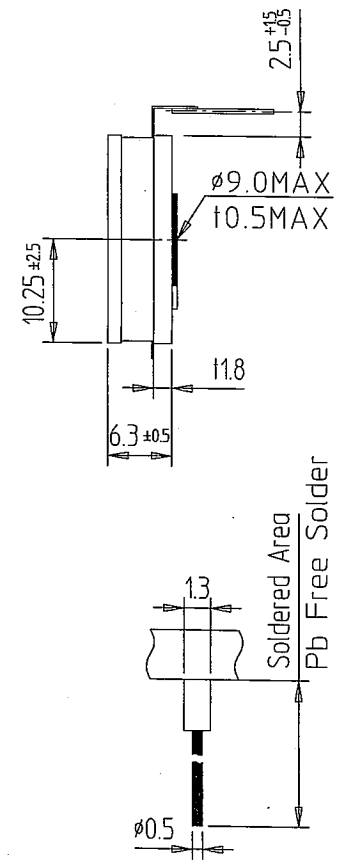
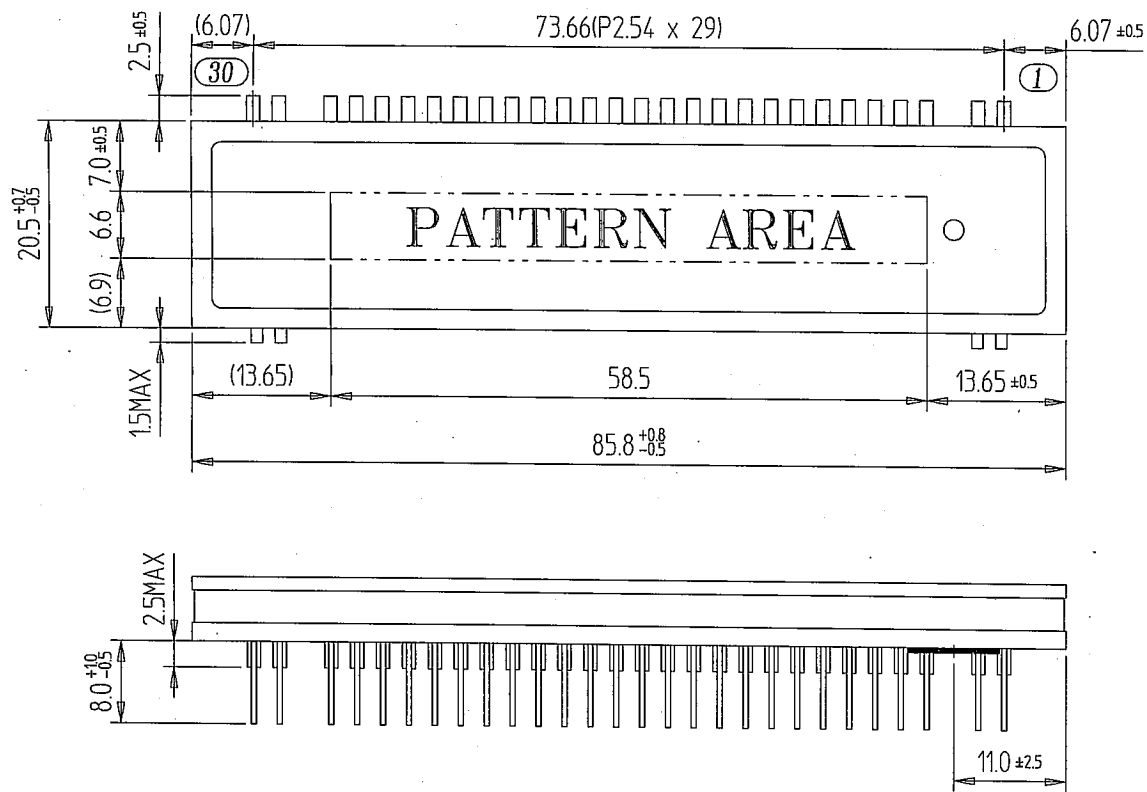
If a user don't keep this condition, then VFD may be permanently damaged.

#5. Recommended Operating Condition : Quality can be assured within this condition.

Typical rating is the most optimized value on the life time

#6. All phosphor is Cd-free phosphor.

OUTER DIMENSIONS



PIN CONNECTION

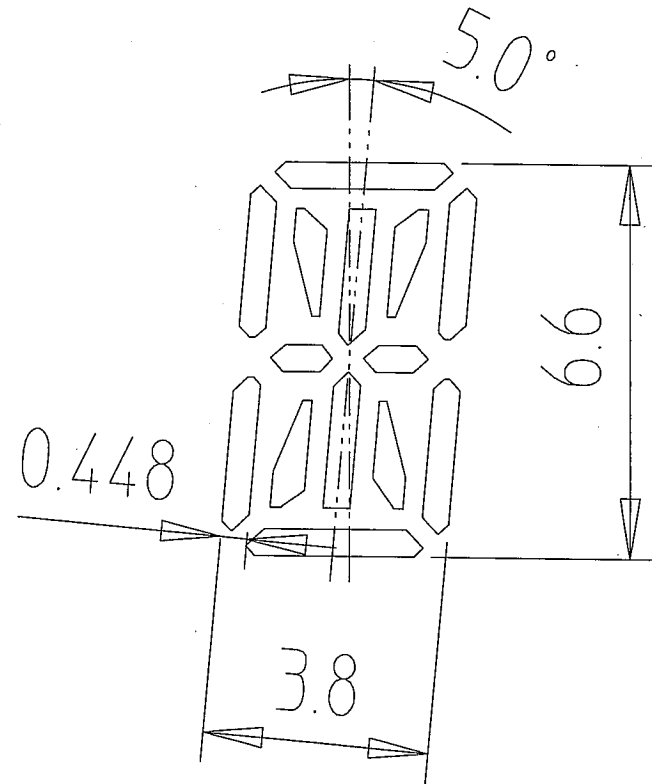
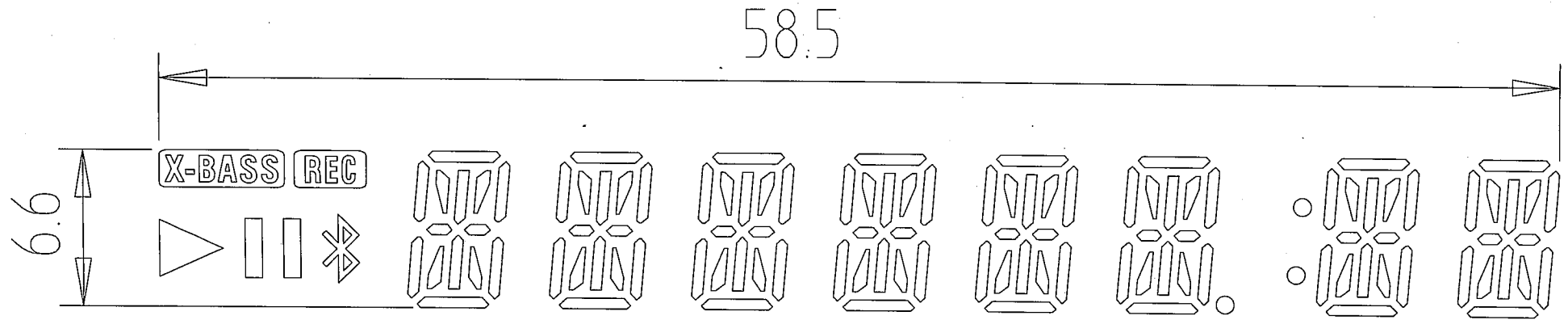
PIN NO.	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTION	F+	F+	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	1G	2G	3G	4G	5G	6G	7G	8G	9G	NP	F-	F-

LEAD DETAILS

- ## Note ##
1. F+, F- : Filament pin
 2. nG : Grid pin
 3. Pn : Anode pin
 4. NP : No Pin

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 OUTER DIMENSIONS
 Rev. ③ 05-Mar-2013

PATTERN DETAILS(1)

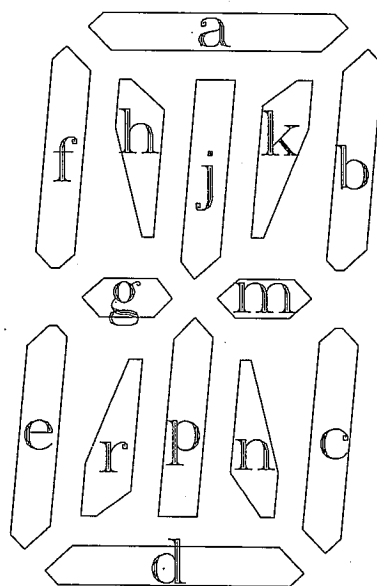
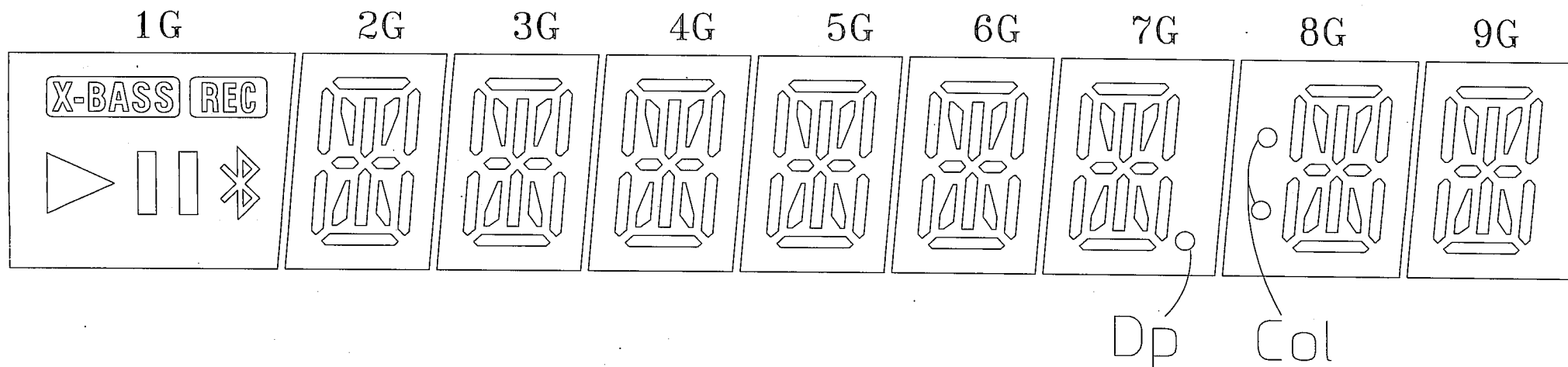


原件
VFD开发

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 · Green (G. x=0.250,y=0.439) ----- All Patterns.

MODEL :HNA-09SS92T
 PATTERN DETAILS(1)
 Rev. ① 20-Dec-2012

GRID ASSIGNMENT






(2G-9G)

原件
VFD开发

MODEL : HNA-09SS92T
 GRID ASSIGNMENT
 Rev. ① 20-Dec-2012

ANODE CONNECTION

	1G	2G	3G	4G	5G	6G	7G	8G	9G
P1		a	a	a	a	a	a	a	a
P2		b	b	b	b	b	b	b	b
P3		c	c	c	c	c	c	c	c
P4	X-BASS	d	d	d	d	d	d	d	d
P5	REC	e	e	e	e	e	e	e	e
P6		f	f	f	f	f	f	f	f
P7		j	j	j	j	j	j	j	j
P8		k	k	k	k	k	k	k	k
P9		m	m	m	m	m	m	m	m
P10		n	n	n	n	n	n	n	n
P11		p	p	p	p	p	p	p	p
P12		r	r	r	r	r	r	r	r
P13		g	g	g	g	g	g	g	g
P14		h	h	h	h	h	h	h	h
P15							Dp	Col	

原件
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 ANODE CONNECTION
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