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**MODEL NUMBER, RATINGS**

MODEL NUMBER	Input Ratings	Output Voltage and Current * 1					
		CH1		CH2		CH3	
		Voltage(V)	Current(A)	Voltage(V)	Current(A)	Voltage(V)	Current(A)
KLT15F-0522	115-230V 50-60Hz	+5	0~2	+12	0~0.5	-12	0~0.5
KLT15F-0533	115-230V 50-60Hz	+5	0~2	+15	0~0.45	-15	0~0.45

\*1: Total output wattage not exceed 15W.

**MAXIMUM RATINGS**

ITEMS		MIN		MAX	UNIT
Input Voltage		85	—	264	Vac
Input Frequency		47	—	63	Hz
Output Power		0	—	15	W
Isolation Resistance	Pri. - Sec. DC 500V	—	100	—	MΩ
	Pri. - Case DC 500V	—	100	—	
	Sec. - Case DC 500V	—	100	—	
Isolation Voltage	Pri. - Sec. 10mA	—	3000	—	Vac 1min.
	Pri. - Case 10mA	—	1500	—	
	Sec. - Case 20mA	—	500	—	
Operating temperature	*2	0	—	60	°C
Storage Temperature		-20	—	85	°C
Humidity	*3	20	—	85	%Rh

\*2: See derating curve FIG.1.

\*3: No condensing

**Electrical Characteristics (Common Items) Ta=25°C, AC115/230V, 50/60Hz, TYP Output**

ITEMS	CONDITIONS	MIN	TYP	MAX	UNIT
Input Regulation	Vin=85~132, 170~264	—	—	50	mV
Input Current	Vin=100V	—	0.37	—	A
	Vin=230V	—	0.2	—	A
In-rush Current	Vin=100V, 50Hz	—	10	—	A
	Vin=230V, 50Hz	—	19	—	A
Rise-up Time	Vin=100V	—	—	100	ms
	Vin=230V	—	—	100	ms
Hold-up Time	CH1	—	20	—	ms
	CH2, CH3	—	20	—	ms
Leakage Current	Vin=100V, 60Hz	—	—	0.5	mArms
	Vin=230V, 60Hz	—	—	0.75	mArms
OCP point		105	—	—	%
Drift	8H, after 1H	—	—	0.5%+15	mV
Tem. coefficient		—	—	0.02	%/°C

KAGA COMPONENTS CO., LTD. NIIGATA FACTORY	SECTION	Drawn	Check	Approved
	Engineer			
	DATE			
	02-Jul-03			

rev. 1		rev. 4	
rev. 2		rev. 5	
rev. 3		rev. 6	
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**Electrical Characteristics (Model by)**

**KLT15F-0522** Ta=25°C, AC115/230V, 50/60Hz, TYP Output

ITEMS	CONDITION		MIN	TYP	MAX	UNIT
OVP point	CH1 only		5.75	—	—	V
Output Voltage		CH1	—	5.0	5.25	V
		CH2	11.4	12.0	12.6	V
		CH3	11.4	12.0	12.6	V
Output Current	*4	CH1	—	1.5	2.0	A
		CH2	—	0.35	0.5	A
		CH3	—	0.28	0.5	A
Load Regulation		CH1	—	—	100	mV
		CH2	—	—	120	mV
		CH3	—	—	120	mV
Ripple	BW=DC~100MHz	CH1	—	—	100	mV
		CH2	—	—	100	mV
		CH3	—	—	100	mV
Ripple and Noise	BW=DC~100MHz	CH1	—	—	150	mV
		CH2	—	—	150	mV
		CH3	—	—	150	mV
Efficiency	Vin=100V		—	66	—	%
	Vin=230V		—	68	—	%

**KLT15F-0533** Ta=25°C, AC115/230V, 50/60Hz, TYP Output

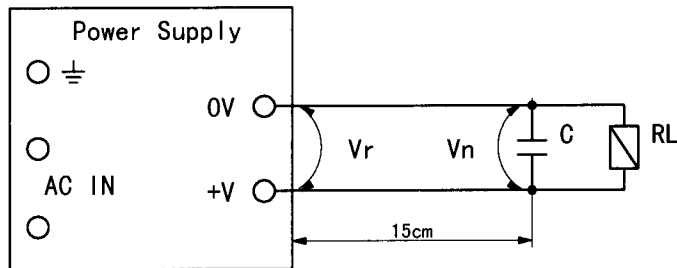
ITEMS	CONDITION		MIN	TYP	MAX	UNIT
OVP point	CH1 only		5.75	—	—	V
Output Voltage		CH1	—	5.0	5.25	V
		CH2	14.25	15.0	15.75	V
		CH3	14.25	15.0	15.75	V
Output Current	*4	CH1	—	1.5	2.0	A
		CH2	—	0.3	0.45	A
		CH3	—	0.2	0.45	A
Load Regulation		CH1	—	—	100	mV
		CH2	—	—	120	mV
		CH3	—	—	120	mV
Ripple	BW=DC~100MHz	CH1	—	—	100	mV
		CH2	—	—	100	mV
		CH3	—	—	100	mV
Ripple and Noise	BW=DC~100MHz	CH1	—	—	150	mV
		CH2	—	—	150	mV
		CH3	—	—	150	mV
Efficiency	Vin=100V		—	66	—	%
	Vin=230V		—	69	—	%

\*4 : Total output wattage do not exceed 15W



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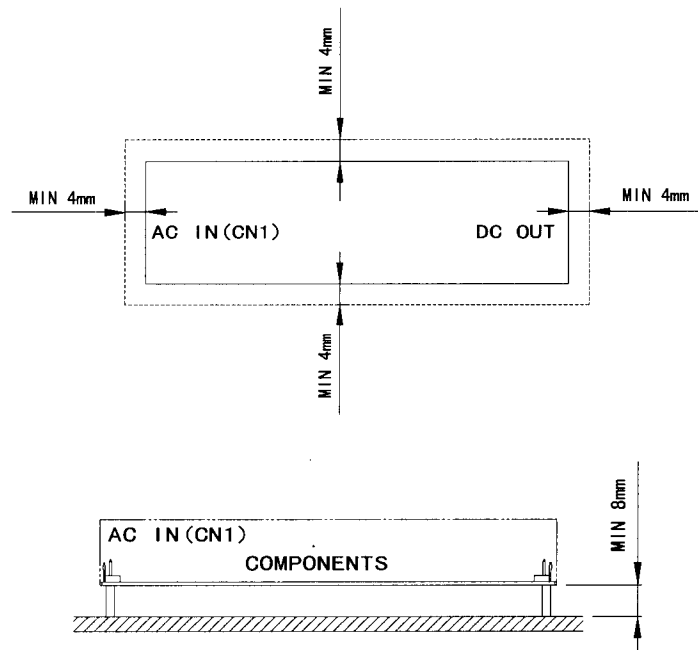
### Measurement Circuit



Vr: Output voltage, line and load regulation  
Vn: Ripple and Noise (with Bayonet probe)  
C: 0.1uF film capacitor and 47 uF electrolytic capacitor)

### Caution


- \* Do not use in overcurrent condition or short mode.
- \* There are differ ground line from CH1 to CH2, CH3.
- \* Using too large of capacitor (10,000 $\mu$ F) on your load may prevent the power supply from providing the rated output voltage.
- \* Do not use output wattage of CH1, Ch2, CH3 more than rated wattage
- \* When installing the components or laying out the pattern around the unit, maintain below. If this distance can not be kept, insert an insulation sheet between them.

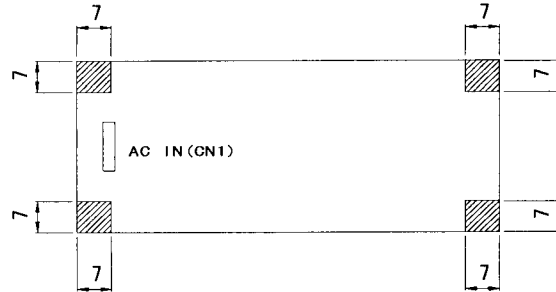


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**Mounting**

Use M3 screw for fix this unit.

 parts is permitted to use metal chassis and screw.



unit (mm)