

# ZT170 SPECIFICATIONS

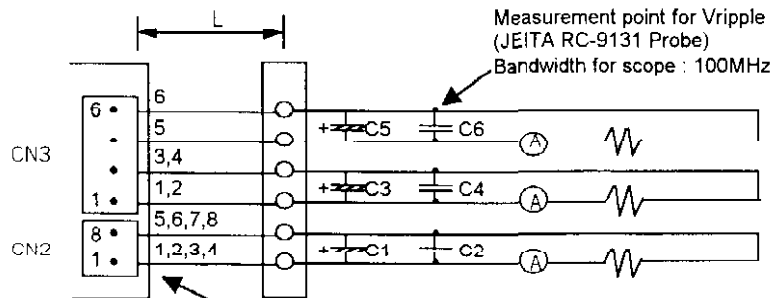
PA741-01-01C

ITEMS		MODEL	ZT170 - 522			ZT170 - 5FF			ZT170 - 525		
			5	+12	-12	5	+15	-15	5	+12	-5
1	Nominal Output Voltage	V	5	+12	-12	5	+15	-15	5	+12	-5
2	Minimum Output Current	A	2	0	0	2	0	0	2	0	0
3	Maximum Output Current (peak current)	A	20	5 (6)	1.0	20	4 (6)	1.0	20	5 (6)	1.0
4	Maximum Output Power (peak power)	W	172 (184)			175 (205)			165 (177)		
5	Efficiency (Typ) (*1)	%	76			76			76		
6	Input Voltage Range (*2)	-	85 ~ 132VAC / 170 ~ 265VAC (47 ~ 440Hz) or 230 ~ 330VDC								
7	Input Current (Typ) (*1)	-	4.4 / 2.2A at 100/200VAC								
8	Inrush Current (Typ)	-	15A at 100 / 30A at 200VAC								
9	Output Voltage Range	-	CH1: +5% - 0% CH2, 3: Fixed								
10	Maximum Ripple & Noise (*3)	mV	120	150	150	120	150	150	120	150	120
11	Maximum Line Regulation (*3, 4)	mV	20	48	48	20	60	60	20	48	20
12	Maximum Load Regulation (*3, 5)	mV	40	96	96	40	120	120	40	96	40
13	Maximum Temperature Drift (*3, 6)	mV	50	240	240	50	300	300	50	240	100
14	Over Current Protection (*7)	-	105% ~								
15	Over Voltage Protection (*8)	-	Output shutdown 115% ~ 135% (CH1 only)								
16	Hold-Up Time (Typ) (*1)	-	17ms at 172W								
17	Operating Temperature (*9)	-	-10 ~ 60°C, CONVECTION : -10~25°C(CH1=15A);30°C(CH1=13A);40°C(CH1=12A); 50°C(CH1=10A); 60°C (CH1=8A,CH2&3=80%) FORCE AIR : -10~50°C(100%);60°C(70%)								
18	Operating Humidity	-	30 ~ 90% RH								
19	Storage Temperature	-	-30 ~ 85°C								
20	Storage Humidity	-	10 ~ 95% RH								
21	Cooling	-	Convection & Forced air Cooling (Depends on o/p loading)								
22	Withstand voltage	-	Input-Output : 3.75KVAC, Input-FG : 2.5KVAC Output-FG : 500VAC 1min								
23	Isolation Resistance	-	More than 100MΩ at 25°C and 70%RH Output-FG 500VDC								
24	Vibration	-	10-55Hz Amplitude (sweep 1 min) Less than 2G X,Y,Z 1h each								
25	Shock	-	Less than 20G								
26	Safety	-	Built to meet UL1950-D3, CSA1402C & DENTORI, VDE0805/ 0806								
27	Conducted Radio Noise	-	Built to meet VCCI-II & FCC class B & VDE class B								
28	Weight	-	700g								
29	Size (W.H.D)	-	110mm X 41mm X 215mm								

## NOTES :

- \*1 : At 100VAC and maximum output power, Ta = 25°C.
- \*2 : For cases where conformance to various safety specs (UL, CSA, VDE) are required to be described as 100-120VAC, 200 - 240VAC 50/60Hz on name plate.
- \*3 : Please refer to Fig A for measurement determination of line & load regulation and output ripple voltage
- \*4 : From 85-132VAC / 170-265VAC, constant load.
- \*5 : From Min load - Full load (Maximum power), constant input voltage.
- \*6 : From -10 ~ +50°C, constant input voltage and load.
- \*7 : Current limiting with automatic recovery.  
Avoid to operate over load or dead short for more than 30 seconds.
- \*8 : OVP circuit will shut down output, manual reset.
- \*9 : At standard mounting method, Fig. B.

FIG.A



L = 150mm AWG#18  
C1, C3, C5 : Elec. Cap. 100µF  
C2, C4, C6 : Film Cap. 0.1µF

Measurement point for  
Vo, Load/line Regulation

PCB

FIG.B

# ZT170

## OUTPUT DERATING

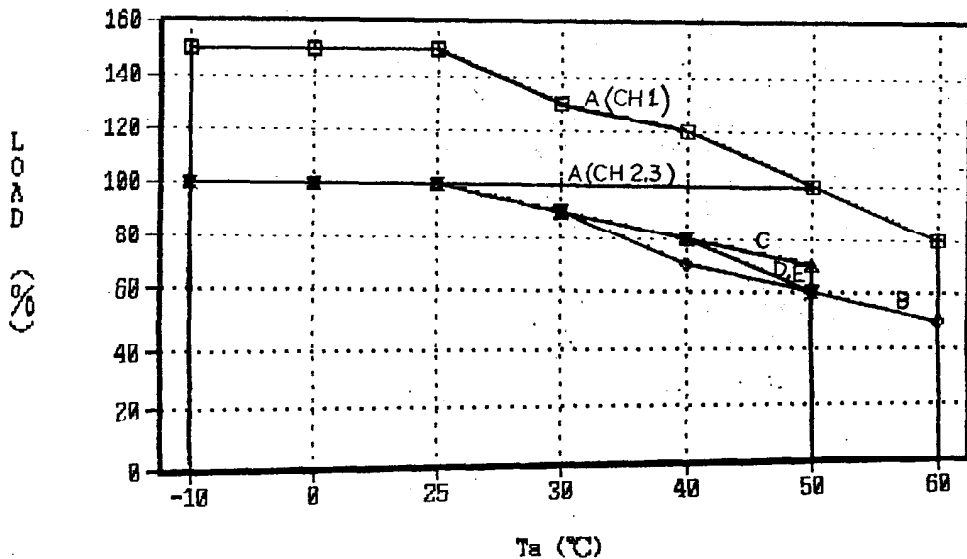
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\* COOLING: CONVECTION COOLING

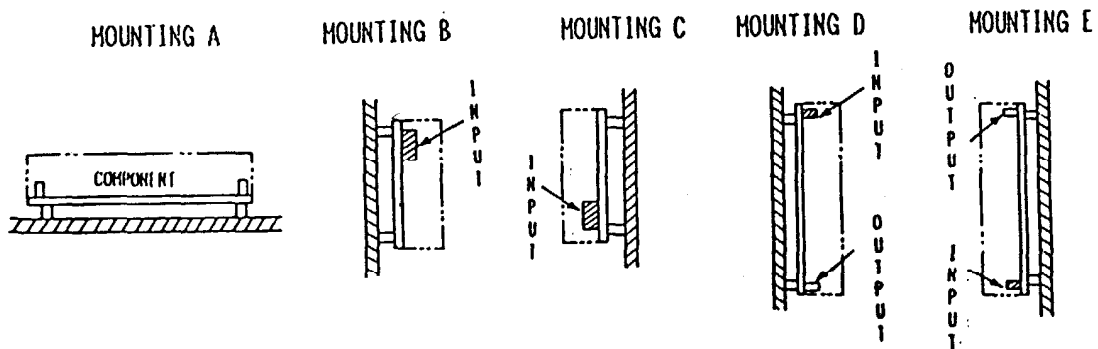
LOAD CONDITION:  $I_o=100\%$ (CH1=10A, CH2=5A(12V), 4A(15V), CH3=1A)

Ta (°C)	LOAD (%)					
	MOUNTING:A CH1	MOUNTING:A CH2,3	MOUNTING:B CH1-3	MOUNTING:C CH1-3	MOUNTING:D CH1-3	MOUNTING:E CH1-3
-10	150	100	100	100	100	100
0	150	100	100	100	100	100
25	150	100	100	100	100	100
30	130	100	90	90	90	90
40	120	100	70	80	80	80
50	100	100	60	70	60	60
60	80	80	50	-	-	-

OUTPUT DERATING CURVE



MOUNT:A(CH1) □ MOUNT:A(CH2,3) ○ MOUNTING:B ◇ MOUNTING:C ▲ MOUNTING:D ×



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OUTPUT DERATING

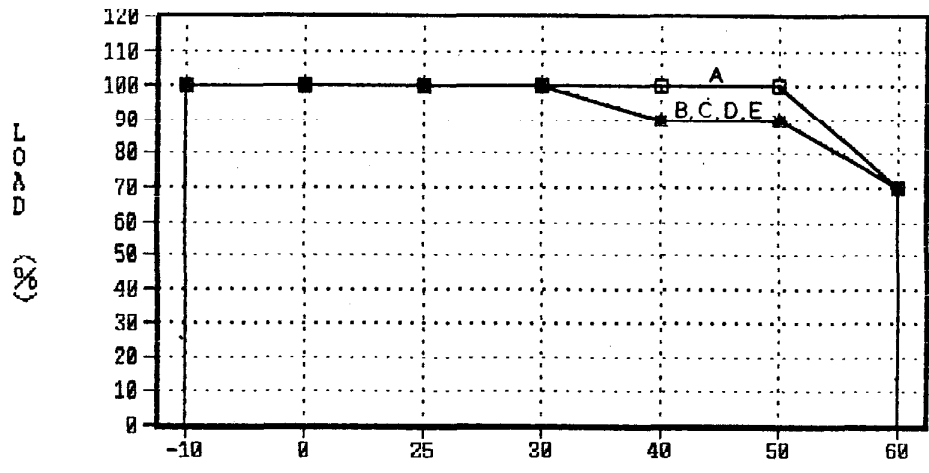
\* COOLING: FORCED AIR

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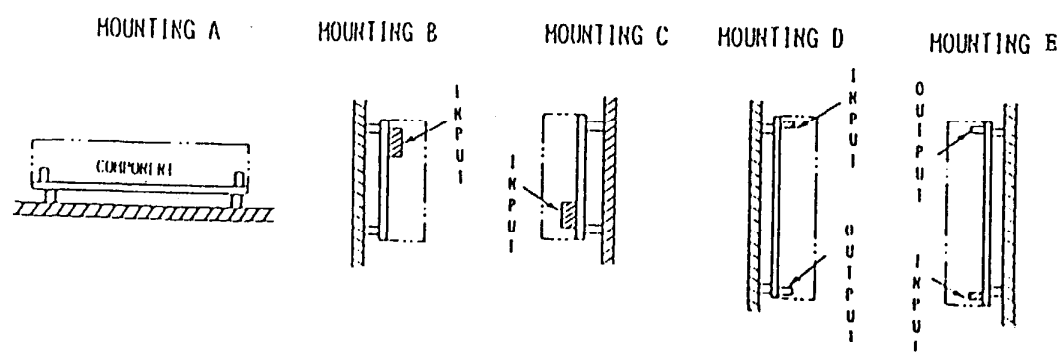
LOAD CONDITION: I<sub>0</sub>=100%(CH1=20A, CH2=5A(12V), 4A(15V), CH3=1A)

Ta (°C)	LOAD (%)				
	MOUNTING:A	MOUNTING:B	MOUNTING:C	MOUNTING:D	MOUNTING:E
-10	100	100	100	100	100
0	100	100	100	100	100
25	100	100	100	100	100
30	100	100	100	100	100
40	100	90	90	90	90
50	100	90	90	90	90
60	70	70	70	70	70

OUTPUT DERATING CURVE



□ MOUNTING:A + MOUNTING:B ◇ MOUNTING:C △ MOUNTING:D × MOUNTING:E



△ NEMIC-LAMBDA