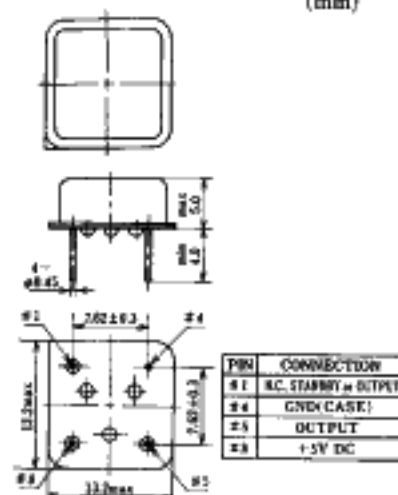


FREQUENCY RANGE VS. OUTPUT LEVEL

Frequency Model	kHz	MHz					MHz		
	28	1	3	4	7	22	25	70	100
TD1100 series DIP 14pin				TD1100 TTL					
1200 series DIP 14pin		1220 TTL/C-MOS				1230 C-MOS 1240 TTL		1270 TTL	
			1250 TTL/C-MOS						
1300 series DIP 8pin		1320 TTL/C-MOS				1330 C-MOS 1340 TTL			
			1350 TTL/C-MOS						
1400 series DIP 8pin				1420 C-MOS		1430 C-MOS 1440 TTL			

1300-1400 series

(mm)



TD1100-1200 series

TD1100 SERIES

Model	TD1100
Feature	
Output Level	TTL
Frequency Range	3.9~70MHz
Frequency Stability ($\times 10^{-4}$)	See Table 1
Operating Temp. Range (°C)	See Table 1
Current	TYP 20~30mA MAX 50mA
$V_{OL}^{MAX}/V_{OH}^{MIN}$	See Table 2
T_r^{MAX}/T_f^{MAX}	See Table 3
Duty Cycle (%)	40~60
Fan out (gate)	TTL 10
Stand-by Function	No
Dual Output	Option

Table 1

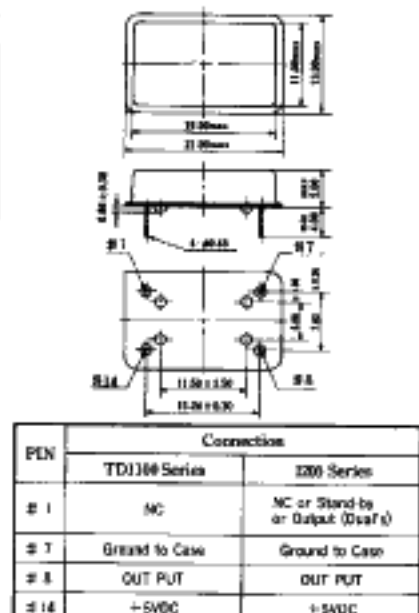
Model	Frequency Stability ($\times 10^{-4}$)	Operating Temp. Range (°C)
TD1100C	± 100	-20~+70
TD1114C	± 500	-20~+70
TD1115C	± 1000	-20~+70
TD1145C	± 50	0~+70
TD1158C	± 100	-40~+85

Table 2

Frequency Range	V_{OL}	V_{OH}
<40 MHz	0.4V ^{MAX}	2.4V ^{MIN}
≥40 MHz	0.5V ^{MAX}	2.4V ^{MIN}

Table 3

Frequency Range	T_r	T_f
~ 5 MHz	15 ns	15 ns
5 ~ 22 MHz	10 ns	10 ns
22 ~ 30 MHz	7 ns	7 ns
30 ~ 70 MHz	5 ns	5 ns



1200/1300/1400 SERIES

Model	1220 (1221~1229)	1230 (1230~1239)	1240 (1240~1249)	1250 (1251~1259)	1270 (1271~1272)	1420 (1429)	1430 (1431~1437)	1440 (1441~1447)
Feature								
Output Level	C-MOS TTL	C-MOS TTL	C-MOS TTL	C-MOS TTL	C-MOS TTL	C-MOS TTL	C-MOS TTL	C-MOS TTL
Frequency Range	28kHz~22MHz	22~70MHz	22~70MHz	3~25MHz	70~100MHz	7~22MHz	22~70MHz	22~70MHz
Frequency Stability ($\times 10^{-4}$)	± 50 ± 100	± 50 ± 100	± 50 ± 100	± 50 ± 100	± 200 ± 100	± 100	± 100	± 100
Operating Temp. Range (°C)	0~+70 -20~+70	0~+70 -20~+70	0~+70 -20~+70	0~+70 -20~+70	-20~+70 -20~+70	-20~+70 -20~+70	-20~+70 -20~+70	-20~+70 -20~+70
Current	TYP 5mA MAX 10mA	13~22mA 25~40mA	13~22mA 25~40mA	11mA 25mA	25~35mA 50mA	10~30mA 40mA	40~80mA 50~85mA	35~80mA 45~85mA
$V_{OL}^{MAX}/V_{OH}^{MIN}$	0.5V/ V_{DD} -0.5V	0.5V/ V_{DD} -0.5V	0.4/2.4V or 0.5/2.4V	0.5V/ V_{DD} -0.5V	0.5/2.4V	0.5V/ V_{DD} -0.5V	0.5V/ V_{DD} -0.5V	0.4/2.4V
T_r^{MAX}/T_f^{MAX}	10/10ns	5/5 ns	5/5 ns	7/7 ns	5/5 ns	6/6 ns	6/6 ns	3.5/3.5ns
Duty Cycle (%)	40~60 for 1229 and 1329	40~60	40~60	45~55 at 1/2V _{DD} 40~60 at 1.4V	40~60	45~55	45~55	40~60
Fan out (gate)	TTL 2	5	5	5	(AS or F) 5	$C_L = 150pF^{MAX}$	$C_L = 150pF^{MAX}$	5
Stand-by Function	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dual Output	Option 1229, 1329	No	No	No	No	No	No	No