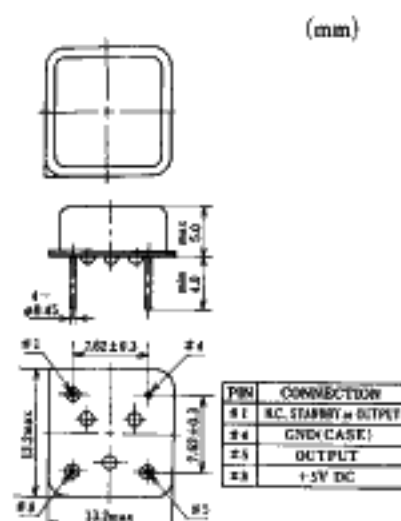


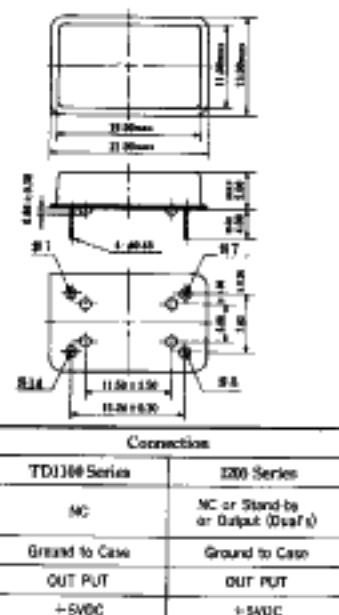
FREQUENCY RANGE VS. OUTPUT LEVEL

Model	Frequency		Output Level							
	kHz	MHz	28	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



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	No

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 ^{MIN}	2.4V ^{MIN}

Table 3

Frequency Range	T_r	T_f
~ 8 MHz	15 ns	15 ns
8 ~ 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)	—	—	—	
	1320 (1321~1329)	1330 (1330~1339)	1340 (1340~1349)	1350 (1351~1359)	—	1420 (1429)	1430 (1431~1437)	1440 (1441~1447)	
Output Level	C-MOS TTL	C-MOS	— TTL	C-MOS TTL	TTL	C-MOS	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	± 200	± 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	
Current	TYP	5mA	13~22mA	13~22mA	11mA	25~35mA	10~30mA	40~80mA	35~80mA
	MAX	10mA	25~40mA	25~40mA	25mA	50mA	40mA	50~85mA	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	