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■ SCOPE

This shall cover the characteristics of all the FTO SERIES, which can be used in AV equipment, OA Equipment, communication equipment and measuring instruments.

■ DIMENSIONS:

See fig.1

■ ELECTRICAL CHARACTERISTICS

table 1

Item		Requirement	Note
Holder Type		DIL-8	
Nominal frequency	**Fo**	0.5Mhz –80.000 MHz	
Output		HCMOS	
Operating temperature	**To**	0 to 70 ℃	
Store temperature	**ST**	-55 to 125 ℃	
Input voltage	**VI**	5±0.5Vdc	
Input current		20mA (0.5–23.99 MHz) 40mA (24-80 MHz)	
Freq. reliability		±50 ppm	
Duty		40%-60%	
Rise time	**Tr**	8ns	
Fall time	**Tf**	8ns	
Lower potentiometer		0.5 Vdc max	
High potentiometer		4.5 Vdc min	
Output load		15pf	
Start up time		10ms max	
Output wave form		Square	
Insulation resistance	**Ir**	500MΩ	(DC500±10V)min
Aging rate		± 10 ppm/y	

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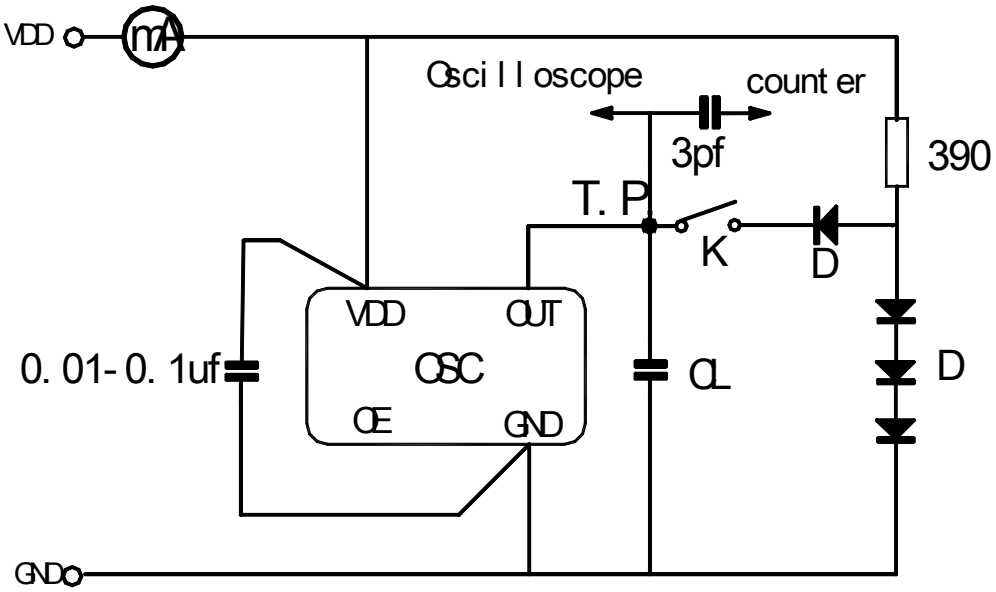
■ MEASUREMENT

item	REQUIREMENT
Test instrument	It shall be measured by Oscilloscope 24658 and TR5821.
Test circuit	See Fig.2
Measurement	Standard condition: (1) Temperature 25 ±3℃ (2) Relative humidity 60± 10% R.H
Condition	The measurement shall be in the temperature range of 5℃ to 35℃ and relative humidify range of 45% to 85% when there are no faults

Fig. 2



K=ON for TTL load
K=OFF for CMOS load
D:1N916 & 1N4148
CL=15, 25, 30, 50pf (including fixture and probe cap.)

■ MEASUREMENT CONDITOINS:

1,OSILLOSCOPE
Impedance: No less than 1M.
Capacitance: no more than 15pf.
Band width: No less than 500MHz.

2, Grounding should be single-point grounding.

3, Supply impedance should be as low as possible,0V- 4.5V rise time is No less than 150us.

4, use an ammeter with small internal impedance.

This standard is defined in accordance with IEC1178-1: 1993.OC6800000 and GB/T12273-1996.

■ PHYSICAL CHARACTERISTICS

Test Item	Condition of test	Performance Requirements
Shock **(Destructive)**	Samples shall be tested after 3 times random drops from the height of 50 cm onto hard wooden broad of thickness more than 30 mm.	No visible damage, and measured Values shall meet Table 1.
Vibration **(Destructive)**	Subject samples to following vibration Frequency: 10-55Hz Amplitude: 0.75mm Cycle time: 1~2min(10-55-10Hz) Duration: 3 mutually perpendicular Planes in each 2 hours Direction: X, Y, Z	No visible damage, and measured values shall meet Table 1.
Terminal Strength **(Destructive)**	Pulling: body of samples shall be fixed, and 1.5kg of tension weight shall be supplied gradually to axial direction of lead terminals for 10+/-5 seconds	Measured values shall meet Table 1 and The lead shall not be broken.
Solder Heating **(Destructive)**	Each lead terminals shall be dipped into the solder melted tank at 270±10℃ for 3 ± 1 seconds to 2mm from the root of the samples ,and at 210±5℃ for 20 ±5 seconds by the same way.	No visible damage, and measured Values shall meet Table 1.
Solder DIP. **(Destructive)**	Dip the lead in liquid solder (10% rosin)for 5 seconds,. At 245±5℃ and 2.0mm from the root , after this dipping , 95% min of dipped parts shall be covered with solder.	No visible damage, and measured Values shall meet Table 1.
Leakage **(non-destructive)**	The samples is to be soaked in the alcohol and enforced with the pressure of 25N/cm2 for 5 minutes Next, the samples shall be tested after being taken out and dried with a dryer.	The Ir between the wire and the shell must be more than 500M Ω .

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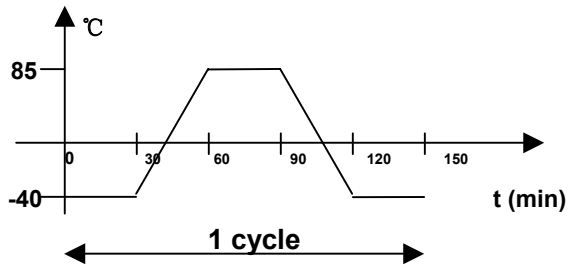
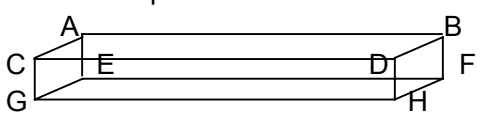
■ ENVIRONMENT ENDURANCE:

<table>
<tr><th>Test Item</th><th>Condition of test</th><th>Performance Requirements</th></tr>
<tr><td>Heat Resistance With bias
(non-destructive)</td><td>Subject samples to 85±5℃ for 16 hours, then place the samples in natural condition for 1 hour.</td><td>No visible damage, measured Values shall meet Table1.</td></tr>
<tr><td>Cold Resistance With bias
(non-destructive)</td><td>Subject samples to -20±5℃ for 2 hours, then, place the samples in natural condition for 1 hour.</td><td>No visible damage, measured Values shall meet Table 1.</td></tr>
<tr><td>Humidity With bias</td><td>Keep the samples at 40±2℃ and 90-95% R.H. for 96 hours. Then place it in natural condition for 1 hour.</td><td>No visible damage, measured Values shall meet Table 1.</td></tr>
<tr><td>Temperature shock With bias</td><td>Temperature shaft from low to high, high to low For 24 hours. And then put the samples in natural Condition for 1 hour.
 
</td><td>No visible damage, measured Values shall meet Table 1.</td></tr>
<tr><td>Package Drop test</td><td>
<table>
<tr><th>No</th><th>Pack. Product gross weight (W)</th><th>Height</th></tr>
<tr><td>1</td><td>W<=9.5kg</td><td>76.2cm</td></tr>
<tr><td>2</td><td>9.5kg<=W<=18.6kg</td><td>61.0cm</td></tr>
<tr><td>3</td><td>18.6kg<W<=27.7kg</td><td>45.7cm</td></tr>
<tr><td>4</td><td>27.7kg<W<45.5kg</td><td>30.5cm</td></tr>
<tr><td>5</td><td>45.5kg<=W</td><td>20.3cm,</td></tr>
</table>
Drop sequence
● Perform pre-test measurement
● Drop on the corner A corner H
● Perform post test measurement 1
● Drop in the edge DH(end panel), edge FH, edge GH
● Perform post test measurement 2
● Drop in the surface ABCD, EFGH, ACEG, BDFH
● Perform post test measurement 3


</td><td>No visible damage, measured Values shall meet Table 1.</td></tr>
</table>

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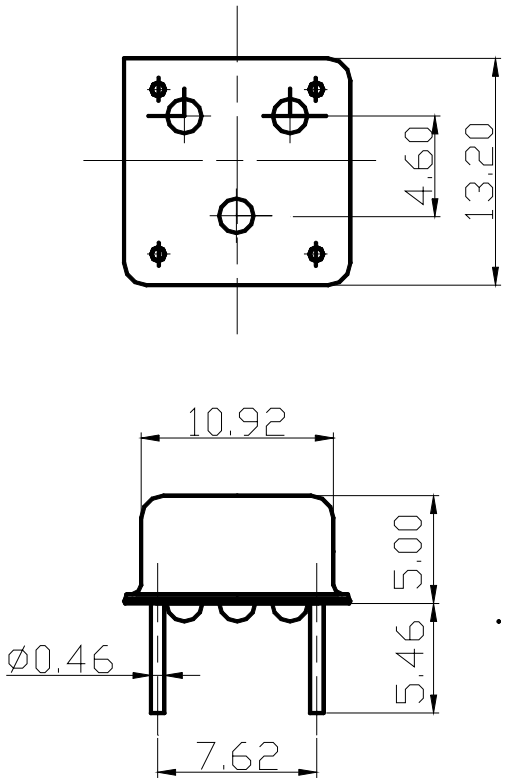
■ REVIEW OF SPECIFICATIONS

When something gets doubtful with these specifications, we shall jointly work to get an agreement.

■ DIMENTIONS: (UNIIT: mm)

FIG.1



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