

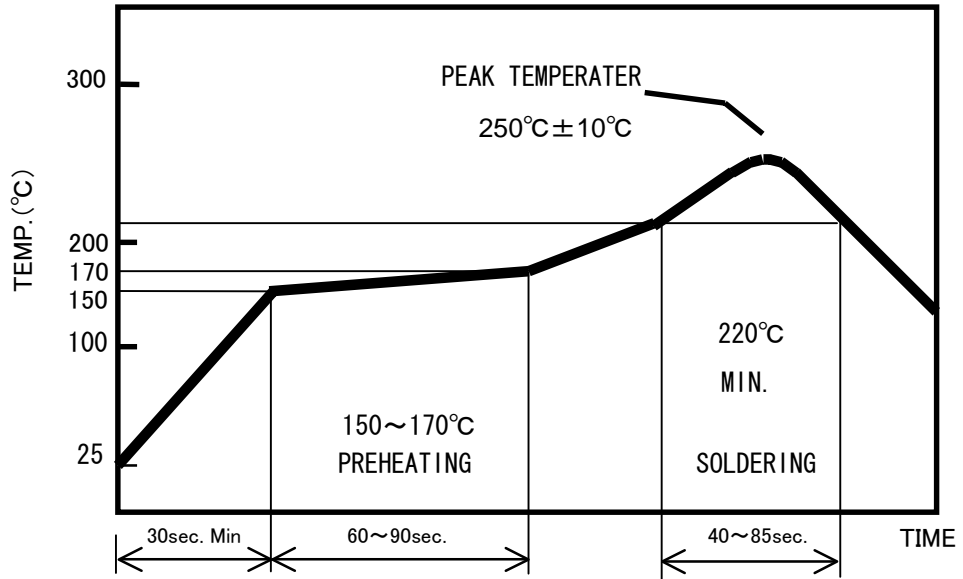
REV.NO.

登録 REGIST.	Supply Specification		名称 TITLE	仕番 SPEC. NO.																																																		
版 年月日 DATE			CRYSTAL OSCILLATOR	TN4-21864																																																		
1 05.05.31	作成部門 SECTION 36410	作成年月日 DATE '05.05.31		頁 P. 1 / 7																																																		
2	<p style="text-align: center;">SPECIFICATIONS</p> <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 50%;">1. MODEL NAME</td> <td>TG-5001LA-50A</td> </tr> <tr> <td>2. ELECTRICAL SPECIFICATIONS</td> <td></td> </tr> <tr> <td>2.1. Output frequency</td> <td>26MHz</td> </tr> <tr> <td>2.2. Supply voltage</td> <td>DC +2.7V±0.1V</td> </tr> <tr> <td>2.3. Current drain</td> <td>1.5 mA max.</td> </tr> <tr> <td>2.4. Output level</td> <td>0.8 V_{p-p} to 1.2 V_{p-p} Clipped sinewave (DC-coupled)</td> </tr> <tr> <td>2.5. Load</td> <td>10kΩ//10pF ±10% each</td> </tr> <tr> <td>2.6. Operating temperature range</td> <td>-10°C to +85°C</td> </tr> <tr> <td>2.7. Storage temperature range</td> <td>-40°C to +85°C</td> </tr> <tr> <td>2.8. Frequency stability</td> <td></td> </tr> <tr> <td> 2.8.1. vs. Temperature</td> <td>±2.5ppm max. / -10°C to +85°C (Referenced to +25°C)</td> </tr> <tr> <td> 2.8.2. vs. Supply voltage</td> <td>±0.2ppm max. / DC +2.7V±0.1V</td> </tr> <tr> <td> 2.8.3. vs. Load</td> <td>±0.2ppm max. / 10kΩ//10pF ±10% each</td> </tr> <tr> <td> 2.8.4. vs. Aging</td> <td>±1.0ppm max. /year ±5.0ppm max. /5years</td> </tr> <tr> <td>2.9. Frequency control</td> <td></td> </tr> <tr> <td> 2.9.1. Frequency control range</td> <td>±9.0ppm to ±16.0ppm /Vcont=+1.2V±1.0V Positive slope</td> </tr> <tr> <td> 2.9.2. Control sensitivity</td> <td>16ppm/V max.</td> </tr> <tr> <td> 2.9.3. Linearity</td> <td>±20% max.</td> </tr> <tr> <td> 2.9.4. Input resistance</td> <td>500kΩ min.</td> </tr> <tr> <td>2.10. Frequency tolerance</td> <td>±1.0ppm max./Vcont=+1.2V,+25°C±2°C before reflow soldering</td> </tr> <tr> <td>2.11. Reflow frequency drift</td> <td>±2.0ppm max./Vcont=+1.2V,+25°C±2°C 1 hour after 2 reflow soldering</td> </tr> <tr> <td>2.12. Duty cycle</td> <td>40% to 60%</td> </tr> <tr> <td>2.13. Harmonics</td> <td>-10dBc max. (3rd), -15dBc max. (Other)</td> </tr> <tr> <td>2.14. SSB phase noise</td> <td>-105dBc/Hz max. @ 100Hz offset -125dBc/Hz max. @ 1kHz offset</td> </tr> <tr> <td>2.15. Start-up time</td> <td>5.0ms max. / to 90% of final amplitude</td> </tr> </tbody> </table>				1. MODEL NAME	TG-5001LA-50A	2. ELECTRICAL SPECIFICATIONS		2.1. Output frequency	26MHz	2.2. Supply voltage	DC +2.7V±0.1V	2.3. Current drain	1.5 mA max.	2.4. Output level	0.8 V _{p-p} to 1.2 V _{p-p} Clipped sinewave (DC-coupled)	2.5. Load	10k Ω //10pF ±10% each	2.6. Operating temperature range	-10°C to +85°C	2.7. Storage temperature range	-40°C to +85°C	2.8. Frequency stability		2.8.1. vs. Temperature	±2.5ppm max. / -10°C to +85°C (Referenced to +25°C)	2.8.2. vs. Supply voltage	±0.2ppm max. / DC +2.7V±0.1V	2.8.3. vs. Load	±0.2ppm max. / 10k Ω //10pF ±10% each	2.8.4. vs. Aging	±1.0ppm max. /year ±5.0ppm max. /5years	2.9. Frequency control		2.9.1. Frequency control range	±9.0ppm to ±16.0ppm /Vcont=+1.2V±1.0V Positive slope	2.9.2. Control sensitivity	16ppm/V max.	2.9.3. Linearity	±20% max.	2.9.4. Input resistance	500k Ω min.	2.10. Frequency tolerance	±1.0ppm max./Vcont=+1.2V,+25°C±2°C before reflow soldering	2.11. Reflow frequency drift	±2.0ppm max./Vcont=+1.2V,+25°C±2°C 1 hour after 2 reflow soldering	2.12. Duty cycle	40% to 60%	2.13. Harmonics	-10dBc max. (3 rd), -15dBc max. (Other)	2.14. SSB phase noise	-105dBc/Hz max. @ 100Hz offset -125dBc/Hz max. @ 1kHz offset	2.15. Start-up time	5.0ms max. / to 90% of final amplitude
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3. REFLOW SOLDERING PROFILE



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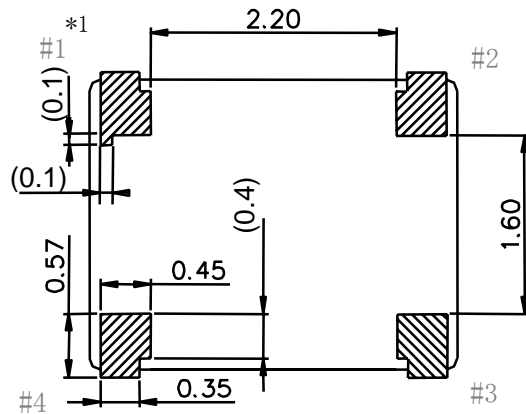
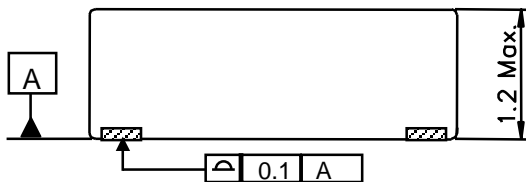
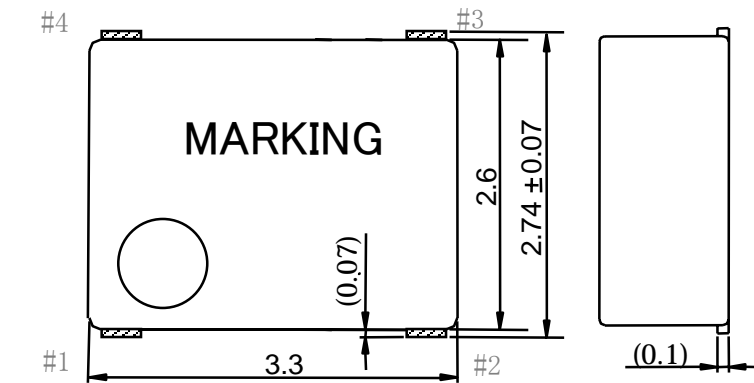
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4. OUTLINE DRAWING



Pin No.	Terminal
#1	Vcont
#2	GND
#3	OUT
#4	Vcc

Terminal treatment : Solder-Plating (Pb-Free)

Unit : mm

Tolerance : +/- 0.1mm

Dimensions in parenthesis is auxiliary value.

*1.The terminal of #1_pin may look being the same as #2 ~ #4_pin

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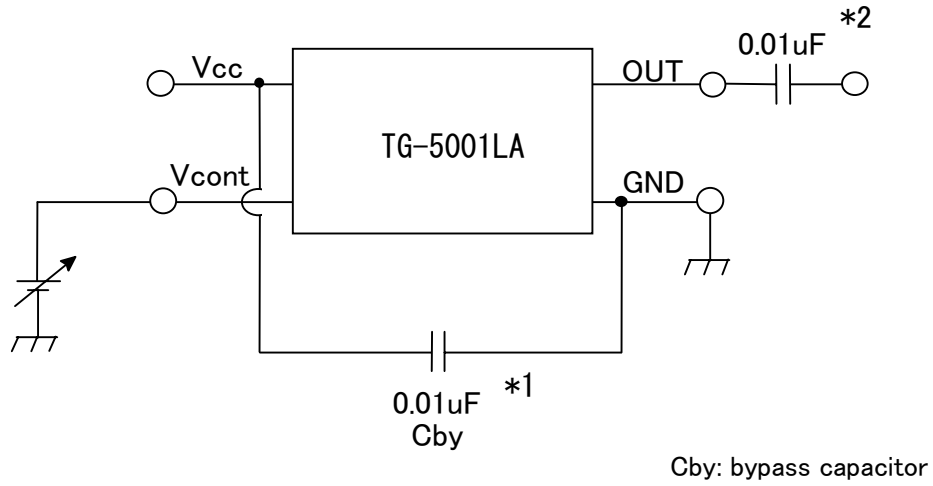
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5. CONNECTION



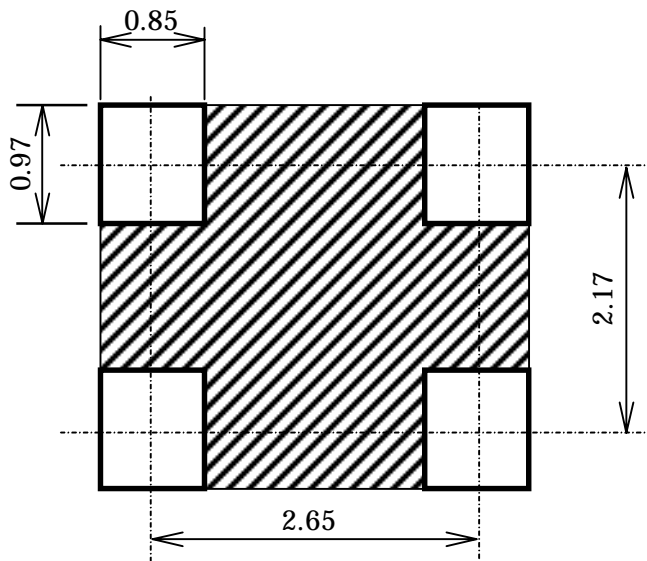
- *1 Please connect capacitor(recommendation:0.01 μ F) between "Vcc" and "GND" terminal.
- *2 Please connect capacitor(recommendation:0.01 μ F) between "OUT" terminal and load.
- *3 This product has one chip LSI. Do not supply over +6V or negative voltage under $-0.3V$ to "Vcc" terminal. Do not supply over $V_{cc}+0.3V$ or negative voltage under $-0.3V$ to "Vcont" terminal. Do not open "Vcont" terminal. Do not supply any voltages to "OUT" terminal.
- *4 Do not supply any voltages in any way which differs from the above connection figure.

6. Recommendable patterning

For actual design work, please consider optimum condition together with mounting density, reliability of soldering and mount ability etc.
Do not design any patterns except GND on the shaded area.

Soldering position

Unit : mm



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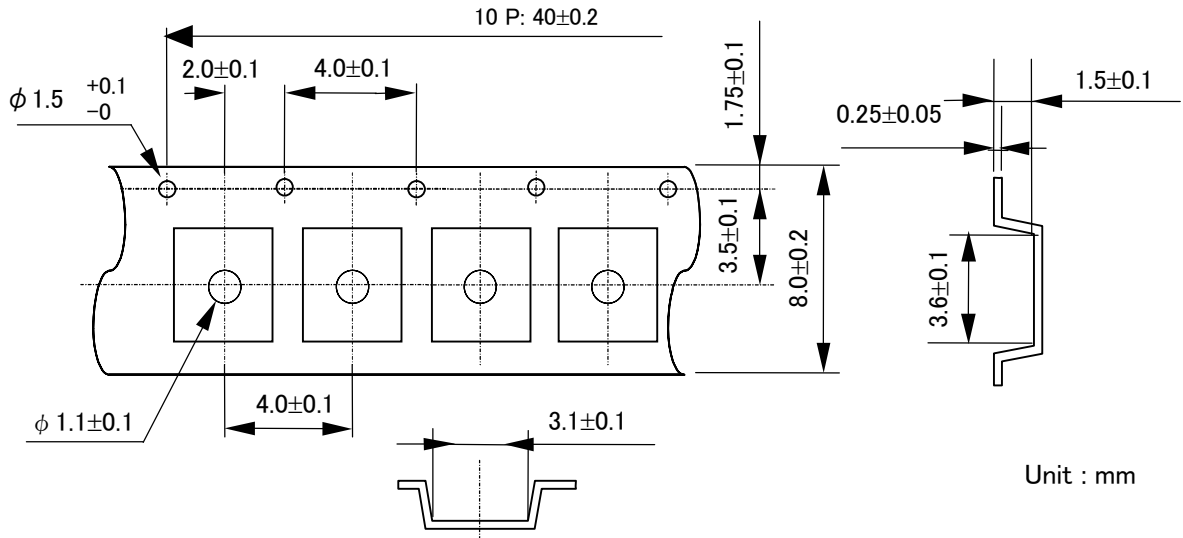
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7. TAPE & REEL PACKAGING SPECIFICATION

7.1. Embossed tape dimension & Outline drawings

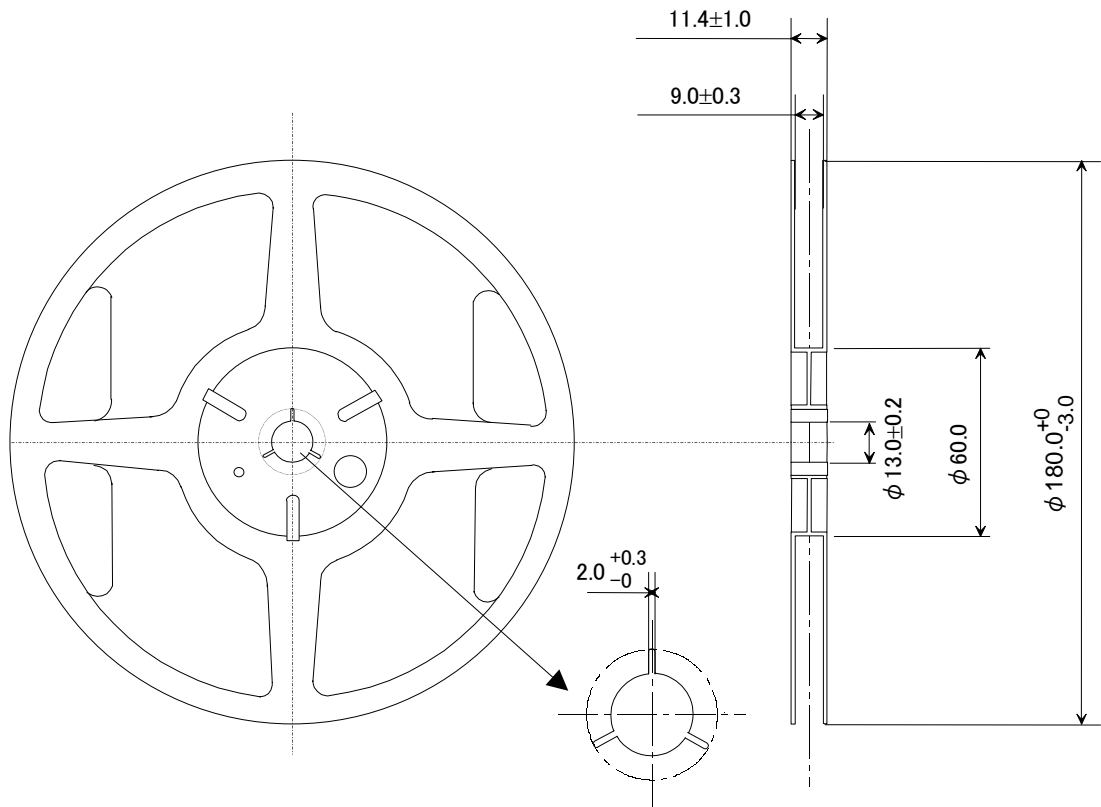
Material of the Carrier Tape : PS

Material of the Top Tape : PET+PE



7.2. Reel dimension & Outline drawing

Material of the Reel : PS



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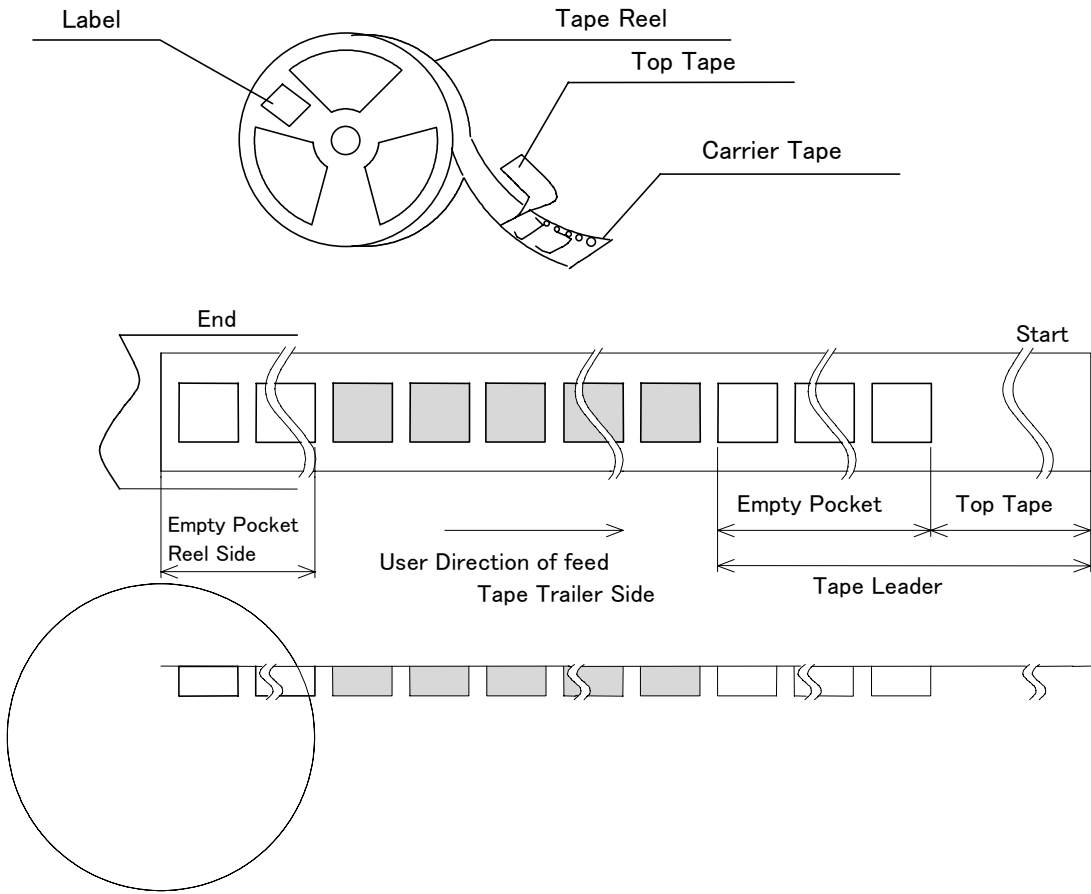
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7.3. Taping package



Item		Empty Space
Tape Leader	Top Tape	Min. 1 000 mm
	Carrier Tape	Min. 160 mm
Tape Trailer	Top Tape	Min. 0 mm
	Carrier Tape	Min. 160 mm

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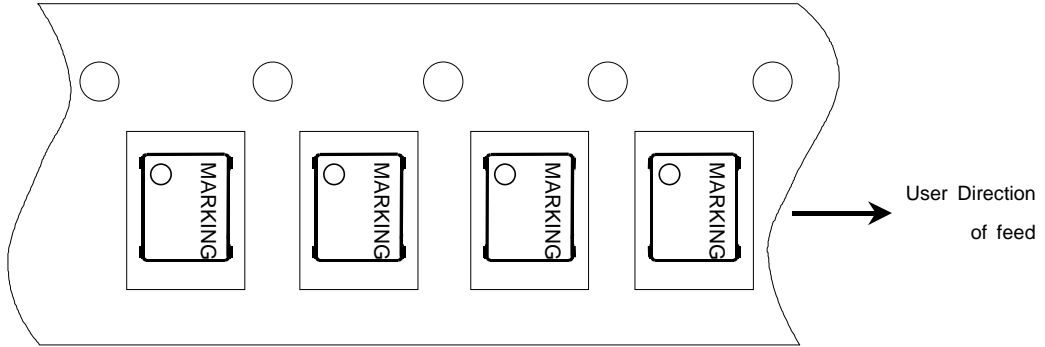
7.4. Quantity of components

2000pcs/reel (MAX.)
500pcs/reel (MIN.)

NOTE

The above quantity is our standard packing size.
In case of an odd sum as per the purchased quantity, the packing quantity might be below our standard minimum packing size.

7.5. Oscillator orientation : TOP VIEW



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