

# MIEC

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## 部品规格书 Part Specification

PART TYPE 产品型号: FULL SIZE OSC

NORMAL FREQ.频率: 40.500 MHZ

MHL P/N . . . 物料编号: MO-12B-40.5M

# MEC

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说明

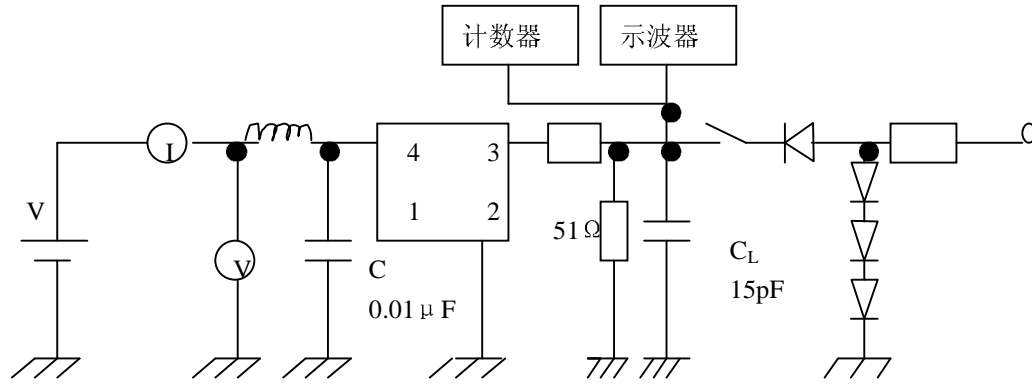
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## 3 Parameters of the OSC

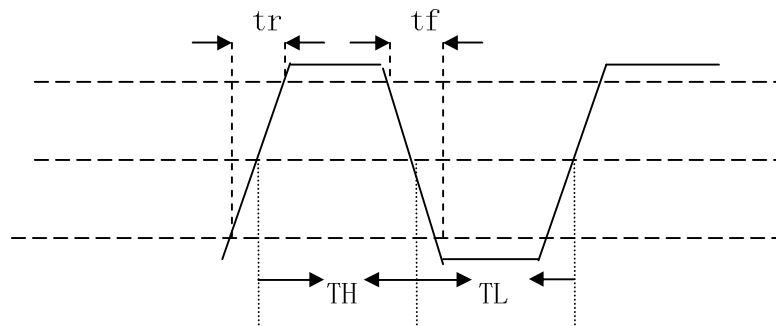
Parameter 参数	MIN	TYPICAL	MAX	Unit
Holding 封装型号	FULL SIZE OSC			
Frequency 频率		40.500		MHZ
Frequency Tolerance @25 ±2°C调整频差	-50		+50	PPM
Operation temperature range 工作温度范围	-40		+85	°C
store temperature range 存储温度范围	-40		+85	°C
Operation Voltage 工作电压	+4.5	+5.0	+5.5	V
Input Current (on load) 工作输入电流			35	mA
Duty Cycle 占空比	45%	50%	55%	
Rise Time (Tr) 上升时间			6	ns
Fall Time (Tf) 下降时间			6	ns
Start time for oscillator 起振时间			6	ms
Output 输出波形和负载	10LSTTL / 15PFHCMOS			
Output Low Voltage Level 输出低电平			0.4V (TTL) 10%VCC (HCMOS)	
Output High Voltage Level 输出高电平	2.4V (TTL) 90%VCC (HCMOS)			
Aging 老化	±5ppm max/Year			

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## Test Circuit 测试电路图



## Output Waveform 输出波形



$$\text{Duty ratio} = [\text{TH}/(\text{TH}+\text{TL})] * 100\%$$

90%VCC (TTL: 2.4V)

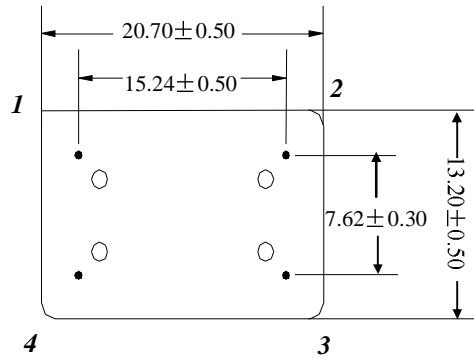
50%VCC (TTL: 1.4V)

10%VCC (TTL: 0.4V)

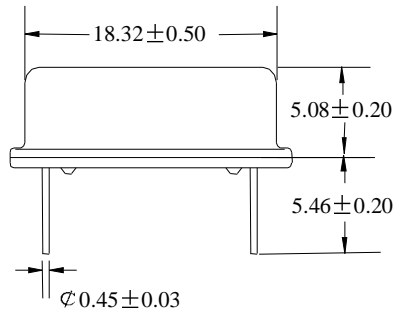
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## 4 Outline Drawing and Pad Function 外观尺寸图

UNIT: mm



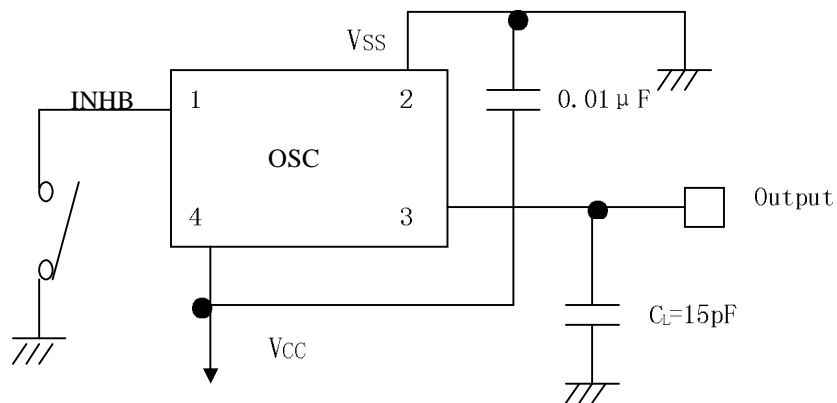
Bottom View



Side View

引脚	1	2	3	4
功能	输出状态控制 / 空 INHB / NC	地 V <sub>SS</sub>	输出 Q <sub>OUT</sub>	电源 V <sub>CC</sub>

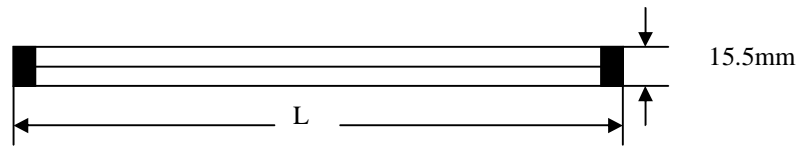
## Using circuit 使用电路图



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## 5 Packing

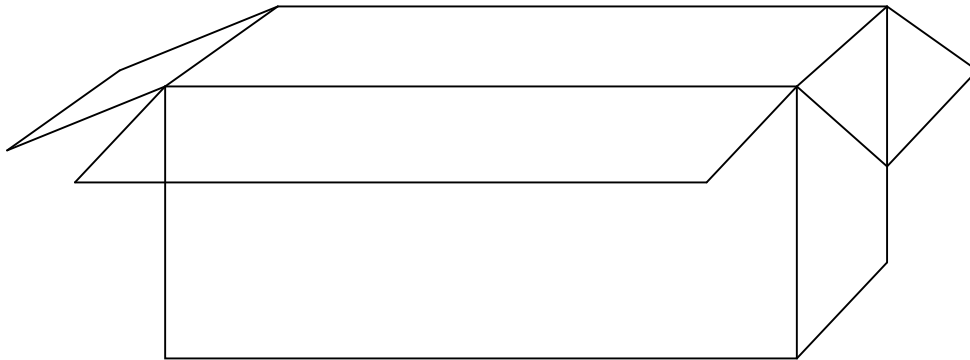
UNIT: mm



一管 One tube: L=508mm (25pcs) / 410mm (20pcs)



一捆=10 管 One truss=10 tubes



外包装内部填充: 白色泡沫填充.

Use white foam material fill in the packing box.

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7/F., New Trend Centre, 704 Prince Edward Road East, San Po Kong, Kowloon, Hong Kong.

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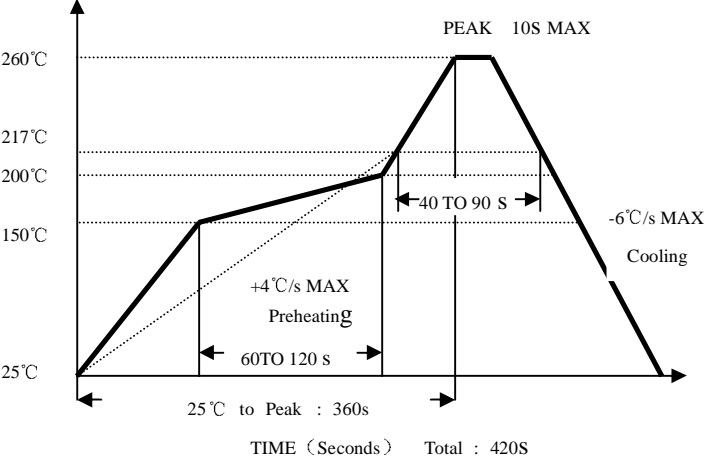
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## 6 ENVIRONMENTAL (可靠性试验) -----Standard 标准: SJ/T 11256-2001

Test Item 项目	Condition of Test 试验条件及要求	Performance Requirements 性能要求
GROSS LEAK TEST 漏率	Helium: force 200kpa, dipping time 70min, blowing 5min, finishing the measure in 30min. 氦质谱, 压力 200kpa, 浸渍时间 70min, 吹风 5min, 30min 内完成测量泄露率 $\leq 4 \times 10^{-9} \text{pa. m}^3/\text{s}$	$\leq 4 \times 10^{-9} \text{pa. m}^3/\text{s}$
Vibration 振动	Endurance condition by a frequency sweep shall be made. the entire frequency range from 10HZ to 55HZ and return to 10HZ, shall be transversed in 1min. Amplitude (total excursion): 1.5mm This motion shall be applied for a period of 2h each of 3 mutually perpendicular axes(a total of 6h) 振动频率: 从 10HZ 到 55HZ, 再回到 10HZ 1 倍频程/min 幅度为 1.5mm 3 个相互垂直的方向各 2 小时	The parameters of table 3 must be satisfied 满足表 3 中的参数要求
Drop 跌落	From 1000mm height 2 times on 30mm hard wooden floor 振荡器从 1000 毫米高处跌落到 30 毫米厚的硬质木板上, 重复 2 次	
Shock 冲击	Peak acceleration: $1000\text{m/s}^2$ Duration of the pulse :6ms Three successive shocks shall be applied in both direction of 3 mutually perpendicular axes( a total of 18 shocks) 加速度: $1000\text{m/s}^2$ 时间: 6ms 作用在 3 个相互垂直的方向	
Damp heat, constant 恒定湿热	The unit shall be stored at a temperature of $40^\circ\text{C} \pm 2^\circ\text{C}$ with relative humidity of 90% to 95% for 56d, then it shall be subjected to standard atmospheric conditions for 1h after which measurement shall be made. 在温度: $40^\circ\text{C} \pm 2^\circ\text{C}$ 、湿度: 90% to 95% 条件下存放 56 天, 然后在标准大气压下放置 1 小时后测试	
Cold 低温存储	The unit shall be stored at a temperature of $-55 \pm 3^\circ\text{C}$ for 2h , then it shall be subjected to standard atmospheric conditions for 1h after which measurement shall be made. 在 $-55^\circ\text{C} \pm 3^\circ\text{C}$ 下存放 2 小时, 然后在标准大气压下放置 1 小时后测试	
Dry heat 高温存储	The unit shall be stored at a temperature of $125 \pm 3^\circ\text{C}$ for 16h , then it shall be subjected to standard atmospheric conditions for 1h after which measurement shall be made. 在 $125^\circ\text{C} \pm 3^\circ\text{C}$ 下存放 16 小时, 然后在标准大气压下放置 1 小时后测试	
Charged aging 带电老化	The unit shall be charged and stored at a temperature of $25 \pm 2^\circ\text{C}$ for 30d. 带电在 $25 \pm 2^\circ\text{C}$ 下放置 30 天	
Aging 温度老化	The unit shall be stored at a temperature of $85 \pm 2^\circ\text{C}$ for 30d , then it shall be subjected to standard atmospheric conditions for 1h after which measurement shall be made. 在 $85 \pm 2^\circ\text{C}$ 下放置 30 天, 然后在标准大气压下放置 1 小时后测试	

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## ENVIRONMENTAL (可靠性试验) -----Standard 标准: SJ/T 11256-2001

Test Item 项目	Condition of Test 试验条件	Performance Requirements 性能要求															
<b>Temperature Cycling</b> 温度循环	<p>The unit shall be subjected to 10 successive change of temperature cycles, each as shown in table below, then it shall be subjected to standard atmospheric conditions for 1h after which measurement shall be made.</p> <p>在下表给定温度和时间参数的条件下循环 10 次, 标准大气压下放置 1 小时后测试</p> <table border="1" data-bbox="418 617 1117 928"> <thead> <tr> <th></th> <th>Temperature 温度</th> <th>Duration 放置时间</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40°C ± 3°C</td> <td>30min (30 分钟)</td> </tr> <tr> <td>2</td> <td>standard atmospheric conditions 标准大气压</td> <td>Within 30S 30 秒内</td> </tr> <tr> <td>3</td> <td>85°C ± 3°C</td> <td>30min (30 分钟)</td> </tr> <tr> <td>4</td> <td>standard atmospheric conditions 标准大气压</td> <td>Within 30S 30 秒内</td> </tr> </tbody> </table>		Temperature 温度	Duration 放置时间	1	-40°C ± 3°C	30min (30 分钟)	2	standard atmospheric conditions 标准大气压	Within 30S 30 秒内	3	85°C ± 3°C	30min (30 分钟)	4	standard atmospheric conditions 标准大气压	Within 30S 30 秒内	<p>The parameters of table 3 must be satisfied</p> <p>满足表 3 中的参数要求</p>
	Temperature 温度	Duration 放置时间															
1	-40°C ± 3°C	30min (30 分钟)															
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3	85°C ± 3°C	30min (30 分钟)															
4	standard atmospheric conditions 标准大气压	Within 30S 30 秒内															
<b>Solder ability</b> 可焊性	<p>Dip terminals in a 235 ± 5°C solder bath for 5 ± 0.5 seconds. The solder shall leave an untapped terminal length of 1.5mm at the base.</p> <p>235 ± 5°C 焊锡槽浸润 5 ± 0.5 秒, 浸润高度距引脚基部 1.5mm.</p>	<b>Solder ability</b> 可焊性															
<b>Resistance to soldering heat</b> 耐焊接热	 <p>Reflow soldering cure see the chart. 使用回流焊方法见上图</p> <p>Soldering iron method: 推荐手工烙铁焊方式</p> <p>Bit temperature : 350°C ± 10°C 温度: 350°C ± 10°C</p> <p>Application time of soldering iron : 3S MAX 时间: 3S MAX</p>	<p>The parameters of table 3 must be satisfied</p> <p>满足表 3 中的参数要求</p>															



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## 7 Notice 备注:

Standard atmospheric conditions:

Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows:

如无其他规定,测试时的标准大气压的范围如下:

Ambient temperature	:	25°C ±10°C
Relative humidity	:	30% to 80%
Air pressure	:	860hPa to 1060hPa

If there is no doubt about the result, the measurements and tests shall be made within the follows limits:

如果对测试结果有疑问,请在下面的条件下测试:

Ambient temperature	:	25°C ±2°C
Relative humidity	:	55% to 65%
Air pressure	:	860hPa to 1060hPa

If there has any change of the Part Specification, the ver code will be changed to B,C .. 如果本规格书有变更,版本号将改变为 B,C... 依次类推.

## 8 ESD LEVEL 防静电等级

HBM CLASS 2 人体模式, 静电等级二

Class 2 : 2000v-4000v