

# 陶瓷振荡子 (CERALOCK®)



## MHz片状型 — 一般电子机器用窄频率公差型 —

配备内藏负载电容器的紧凑封装型片状“CERALOCK”可确保极高的精确度。

村田公司的频率调整和封装专有技术，实现了负载电容器内藏式片状“CERALOCK”。

超微并且不需要外部负载电容器，可实现高密度安装。

### ■特点

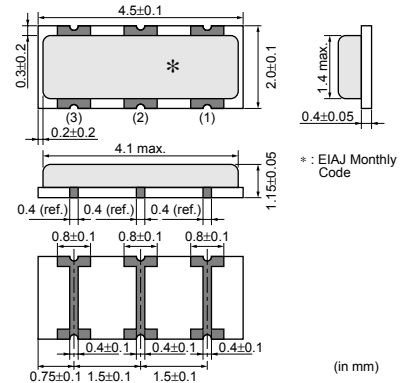
1. 高精度振荡子可确保±250ppm的初始公差。
2. 振荡电路不需外部负载电容器。
3. 可以提供很宽频率范围的该系统产品。
4. 超微型且薄型振荡子。
5. 无需调整即可用于振荡电路。

### ■用途

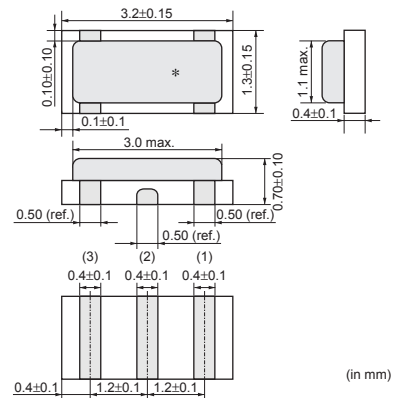
1. 用于USB (高速和全速) 控制器IC的时钟振荡器。
2. 配备有SATA接口的存储装置 (HDD、光存储器等)
3. 音响设备和乐器等
4. 替代晶体振荡器的其他用途



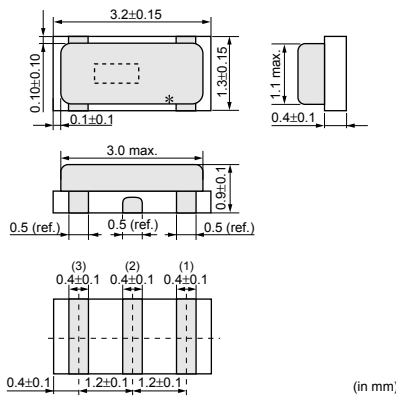
CSTCR\_G15  
4.00-7.99MHz



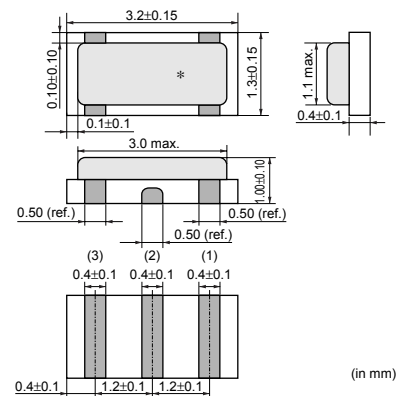
CSTCE\_G15L  
8.00-13.99MHz



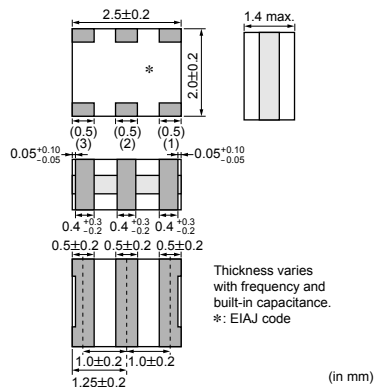
CSTCE\_V13L  
14.00-20.00MHz



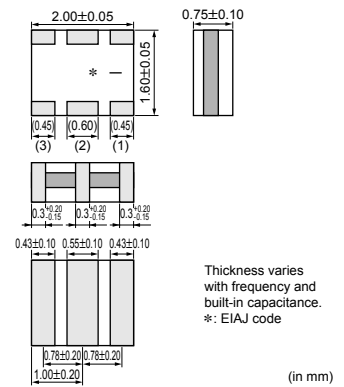
CSTCE\_XK  
24.00/30.00MHz



CSTCW\_X11  
20.01-29.99MHz

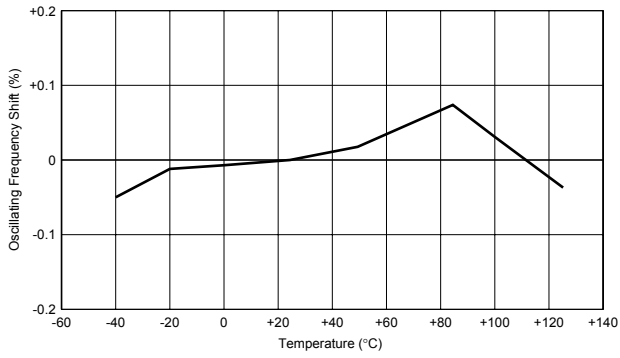


CSTCZ\_X12R  
30.00-48.00MHz

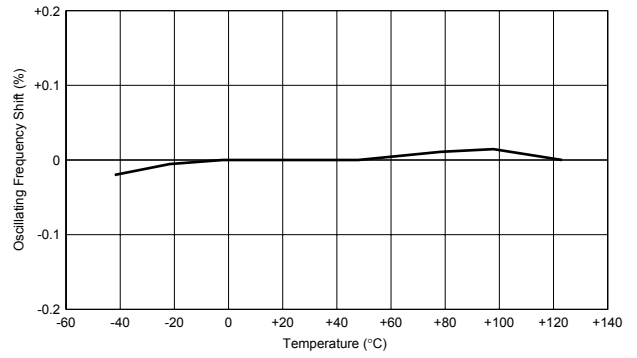


■ 振荡频率温度稳定性

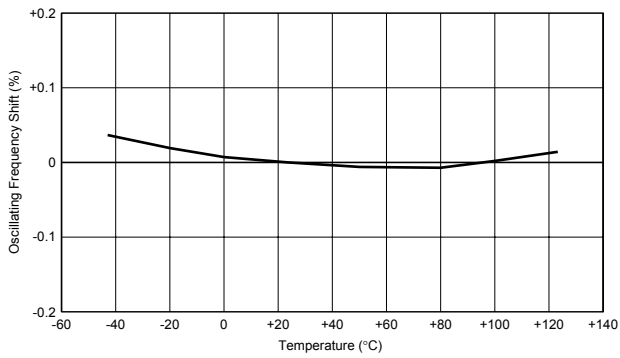
CSTCR\_G15



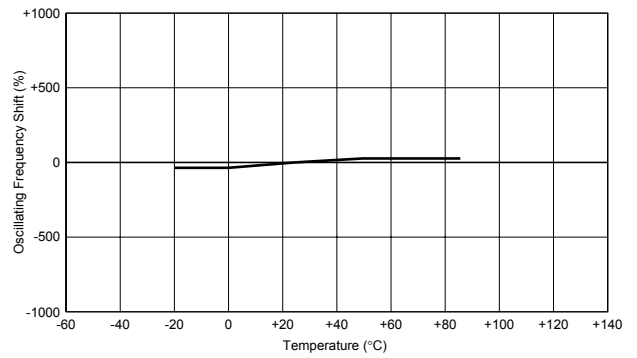
CSTCE\_G15L



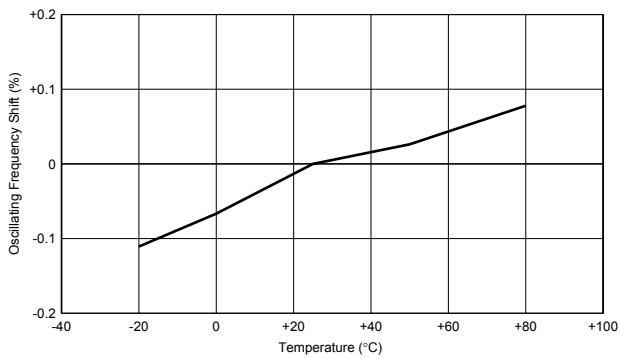
CSTCE\_V13L



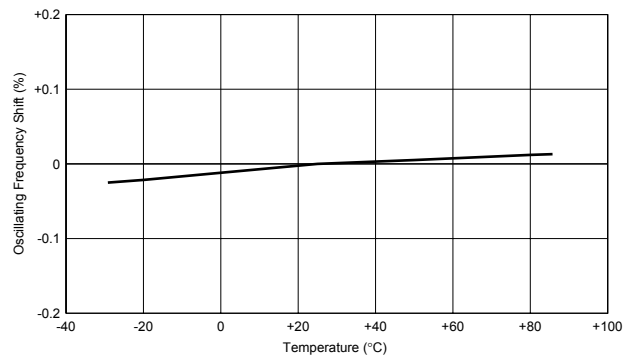
CSTCE\_XK



CSTCW\_X11



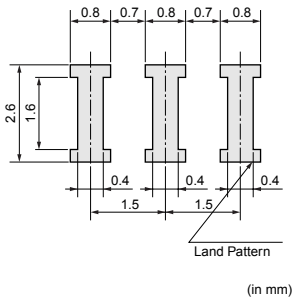
CSTCZ\_X12R



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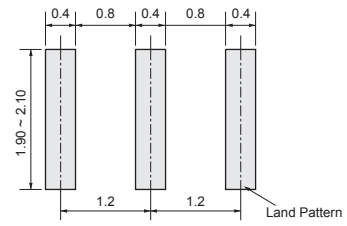
■ 标准焊盘布局尺寸

CSTCR\_G15



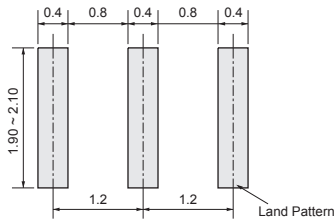
(in mm)

CSTCE\_G15L



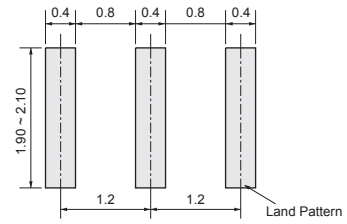
(in mm)

CSTCE\_V13L



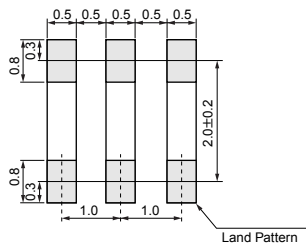
(in mm)

CSTCE\_XK



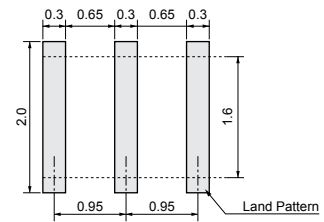
(in mm)

CSTCW\_X11



(in mm)

CSTCZ\_X12R



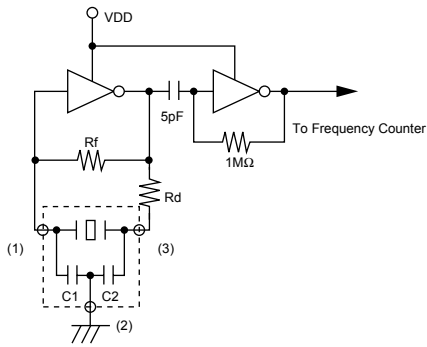
(in mm)

品名	振荡频率 (MHz)	初始偏差	温度稳定性 (%)	温度范围 (C)
<b>CSTCE_XK</b>	-	+0.02 /-0.025%	±0.015	0 to 70
<b>CSTCR_G15</b>	4.00 to 7.99	±0.1%	±0.1	0 to 70
<b>CSTCE_G15L</b>	8.00 to 13.99	±0.1%	±0.08	0 to 70
<b>CSTCE_V13L</b>	14.00 to 20.00	±0.1%	±0.08	0 to 70
<b>CSTCW_X11</b>	20.01 to 29.99	±0.1%	±0.1	0 to 70
<b>CSTCZ_X12R</b>	30.00 to 48.00	±0.15%	±0.05 [0 to 70°C:±0.03%]	-30 to 85

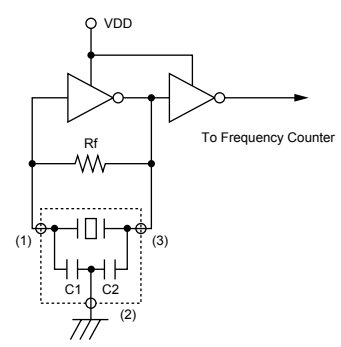
CSTCE\_XK: 可提供24.00MHz和30.00MHz的频率。  
 在不匹配的电路条件下，可能发生不规则振荡或停止振荡。请在使用前检查实际条件。

### ■ 振荡频率测量电路

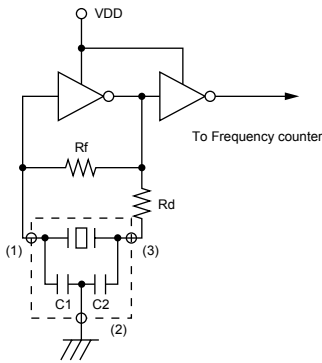
CSTCR\_G15/CSTCE\_G15L/CSTCE\_V13L



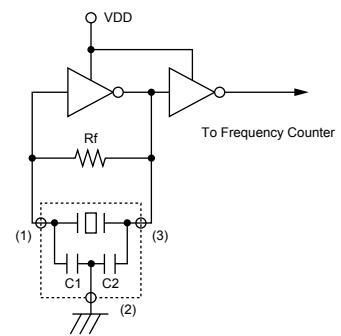
CSTCE\_XK



CSTCW\_X11



CSTCZ\_X12R

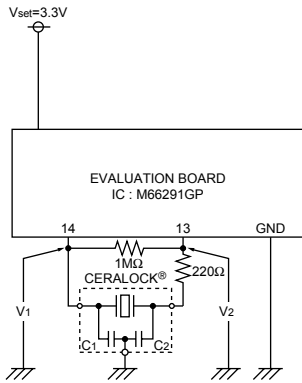


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应用电路

■ M66291GP (Renesas)

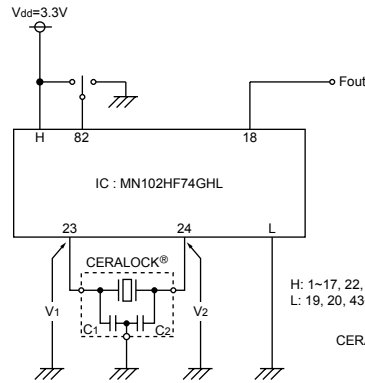
USB收发器



CERALOCK®: CSTCR6M00G15□□□-R0  
 C1=39pF (Typ.)  
 C2=39pF (Typ.)

■ MN102HF74GHL (Panasonic)

16位微型计算机

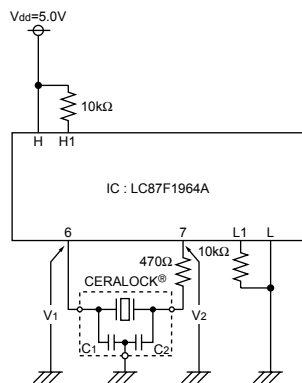


H: 1-17, 22, 25, 26-42, 54, 58-60, 66-81, 83-91  
 L: 19, 20, 43-53, 55-57, 61-65, 82, 92-100

CERALOCK®: CSTCE12M0G15□□□-R0  
 C1=33pF (Typ.)  
 C2=33pF (Typ.)

■ LC87F1964A (Sanyo)

8位微型计算机

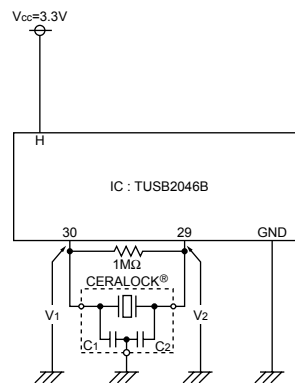


H: 8, 19, 39  
 L: 5, 20, 40  
 H1: 31, 33  
 L1: 29, 30, 32, 34-36

CERALOCK®: CSTCE12M0G15□□□-R0  
 C1=33pF (Typ.)  
 C2=33pF (Typ.)

■ TUSB2046B (Texas Instruments)

USB4端口插孔HUB

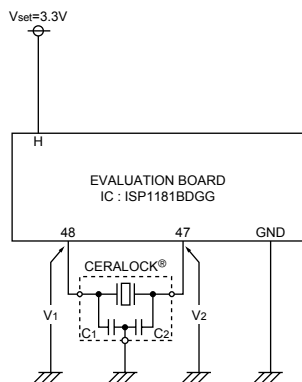


H: 3, 25  
 L: 7, 28

CERALOCK®: CSTCR6M00G15□□□-R0  
 C1=39pF (Typ.)  
 C2=39pF (Typ.)

■ ISP1181BDGG (Philips)

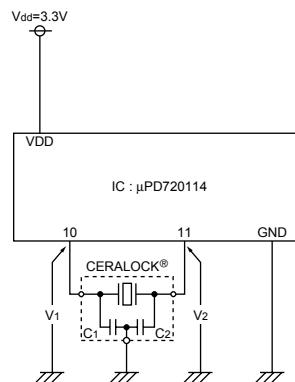
USB控制器



CERALOCK®: CSTCR6M00G15□□□-R0  
 C1=39pF (Typ.)  
 C2=39pF (Typ.)

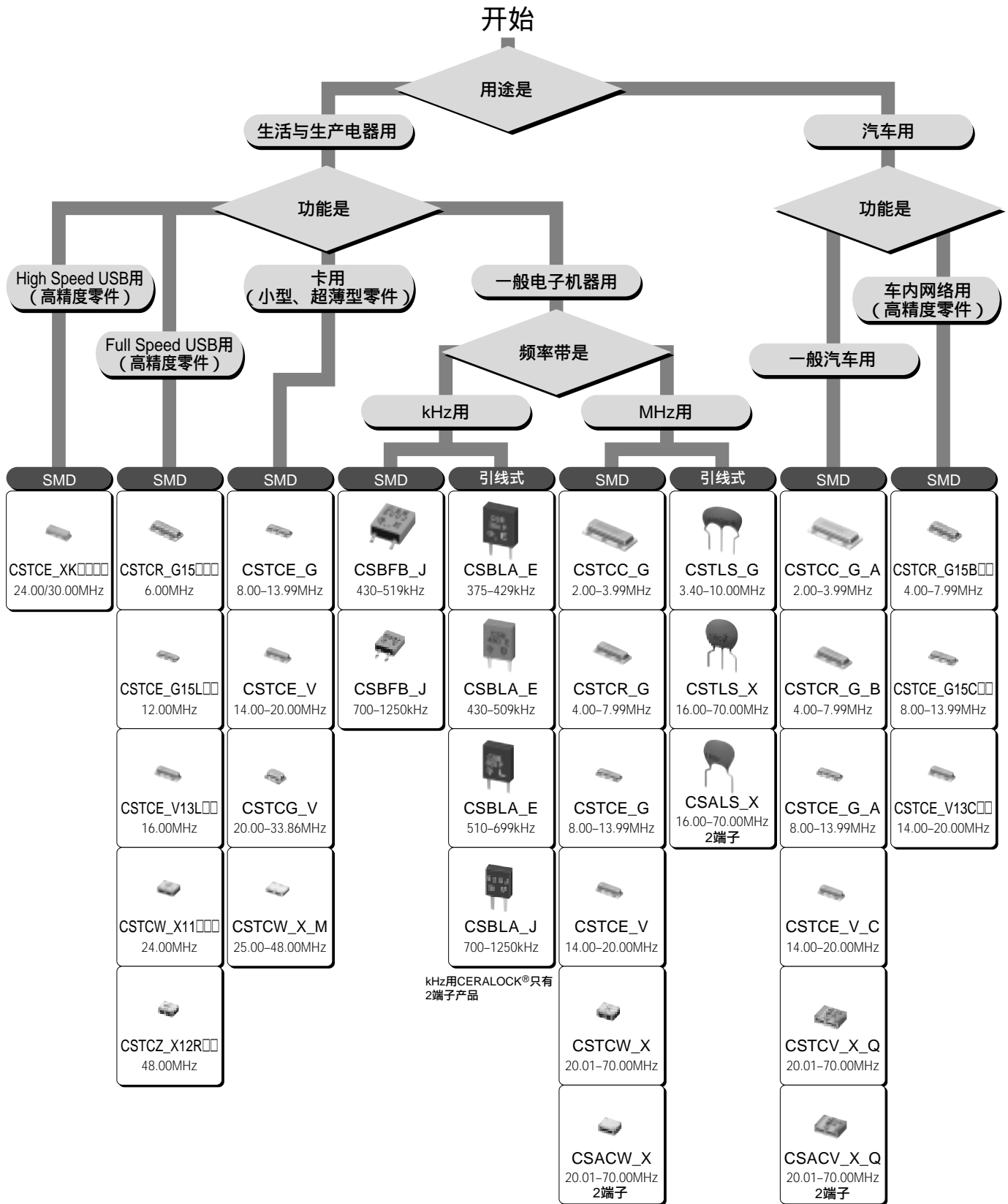
■ uPD720114 (NEC Electronics)

USB2.0 (高速) 插孔HUB控制器



CERALOCK®: CSTCE30M0XK1□□□-R0  
 C1=5pF (Typ.)  
 C2=5pF (Typ.)

# 选择指南



□含有表示个别规格的英文字母和数字。

注) 消费电子用产品和汽车用产品不同于动作温度范围、环境特性、物理特性等规格。请根据您的需求选择符合规格的产品。