

# 陶瓷振荡子 (CERALOCK<sup>®</sup>)



## MHz片状型 — 一般电子机器用标准频率公差型 —

片状“CERALOCK”，内藏负载电容器，超微型。  
 利用村田的专门封装技术，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

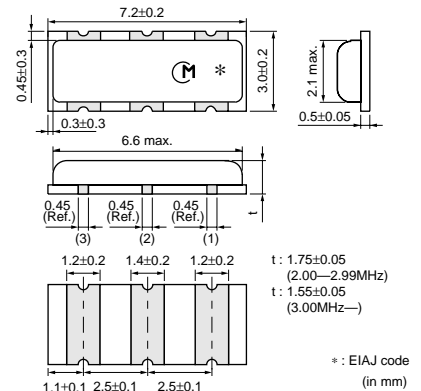
1. 振荡电路不需外部负载电容器。
2. 可以提供很宽频率范围的该系统产品。
3. 超微型且薄型振荡子。
4. 无需调整即可用于振荡电路。

### ■用途

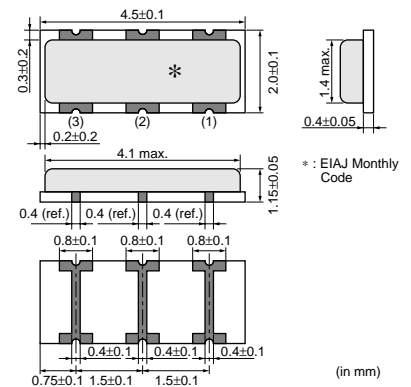
1. 用于微处理器的时钟振荡器
2. 诸如手机、数字视频摄像机 (DVC)、数码照相机 (DSC) 和便携式音频播放器等小型电子设备
3. 存储媒体和存储器 (HDD、光存储器、FDD和闪存卡等)
4. 办公自动化设备 (手提电脑、鼠标、键盘等)
5. 音频和视觉设备 (电视机、DVD-HDD录像机、音响设备和遥控器等)
6. 家用电器设备 (空调、微波炉、电冰箱、洗衣机等)



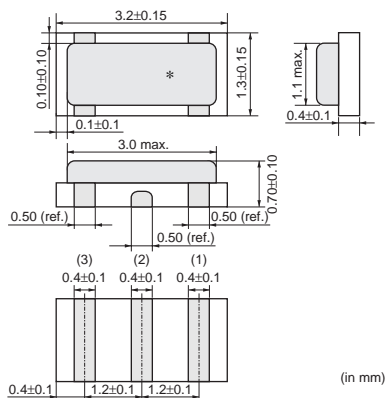
CSTCC\_G  
2.00-3.99MHz



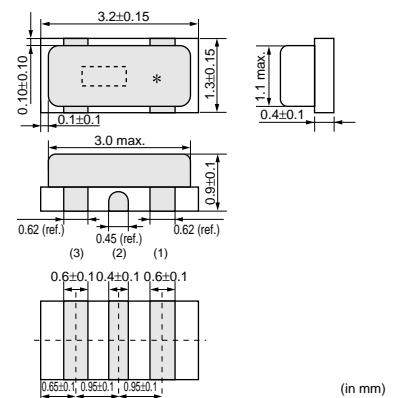
CSTCR\_G  
4.00-7.99MHz



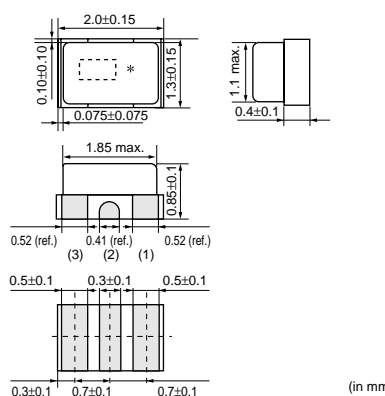
CSTCE\_G  
8.00-13.99MHz



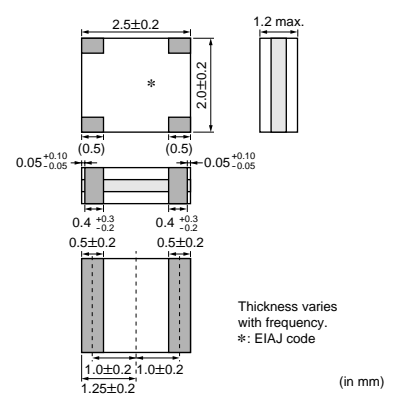
CSTCE\_V  
14.00-20.00MHz



CSTCG\_V  
20.00-33.86MHz  
(超微型)



CSACW\_X  
20.01-70.00MHz

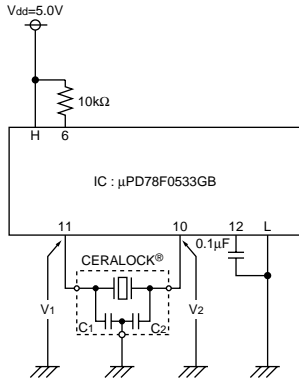


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■ uPD78F0533GB (NEC Electronics)

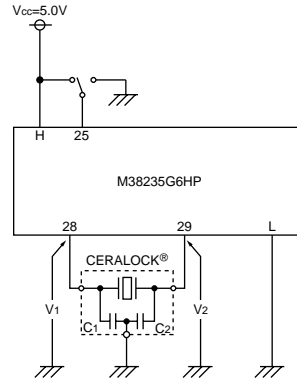
8位微型计算机



H: 15, 16, 47  
 L: 9, 13, 14, 48  
 CERALOCK®: CSTCR4M00G55-R0  
 C1=39pF (Typ.)  
 C2=39pF (Typ.)

■ M38235G6HP (Renesas)

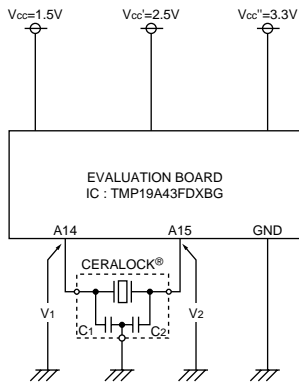
8位微型计算机



H: 71  
 L: 30, 73  
 CERALOCK®: CSTLS8M00G53-B0  
 C1=15pF (Typ.)  
 C2=15pF (Typ.)

■ TMP19A43FDXBG (Toshiba)

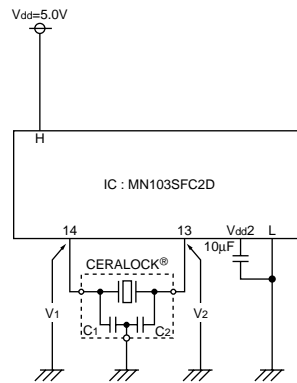
32位微型计算机



Xin: A14  
 Xout: A15  
 CERALOCK®: CSTCE10M00G52-R0  
 C1=10pF (Typ.)  
 C2=10pF (Typ.)

■ MN103SFC2D (Panasonic)

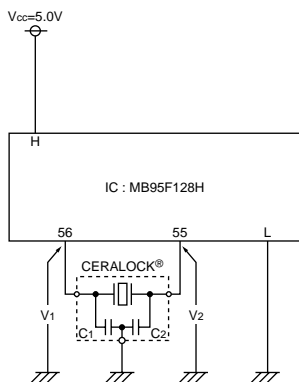
32位微型计算机



H: 9, 17, 34  
 L: 7, 15, 36  
 Vdd2: 16, 38  
 CERALOCK®: CSTCR5M00G55Z-R0  
 C1=39pF (Typ.)  
 C2=39pF (Typ.)

■ MB95F128H (Fujitsu)

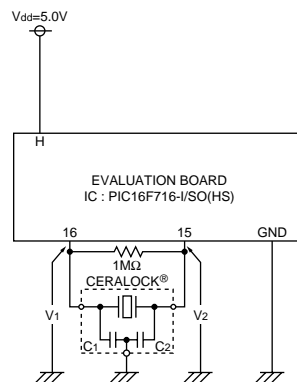
8位微型计算机



H: 3, 28, 51, 79  
 L: 4, 29, 54, 57  
 CERALOCK®: CSTCE8M00G52-R0  
 C1=10pF (Typ.)  
 C2=10pF (Typ.)

■ PIC16F716-I/SO (Microchip)

8位微型计算机

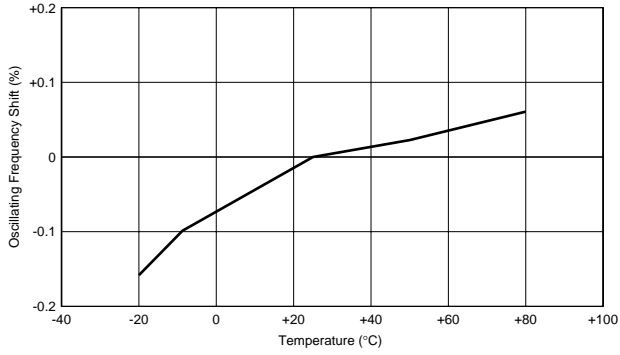


CERALOCK®: CSTCE12M00G52A-R0  
 C1=10pF (Typ.)  
 C2=10pF (Typ.)

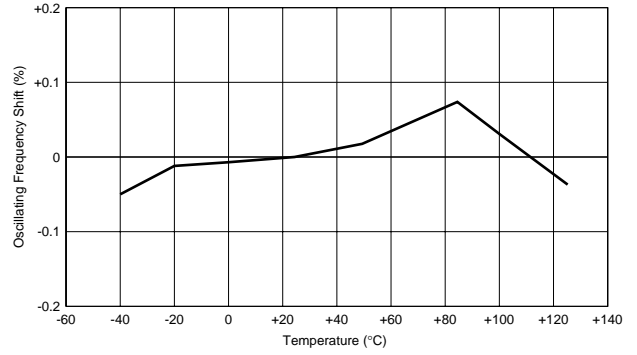
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■ 振荡频率温度稳定性

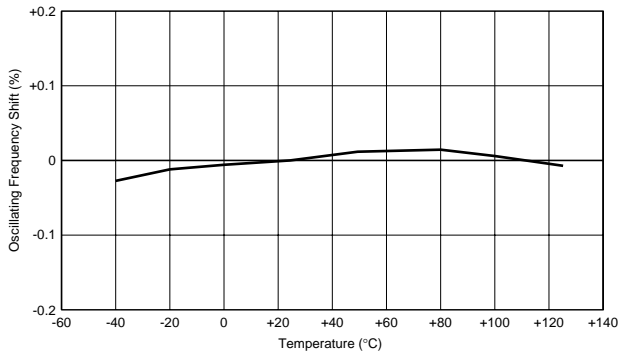
CSTCC\_G



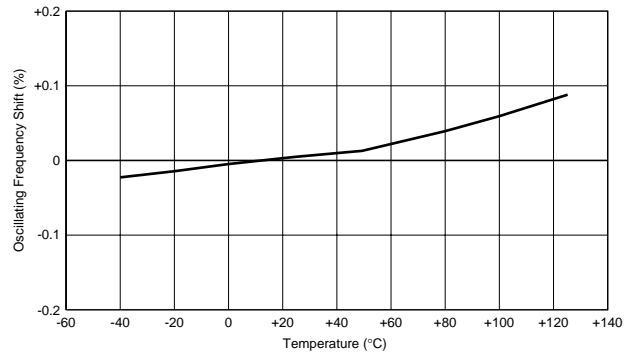
CSTCR\_G



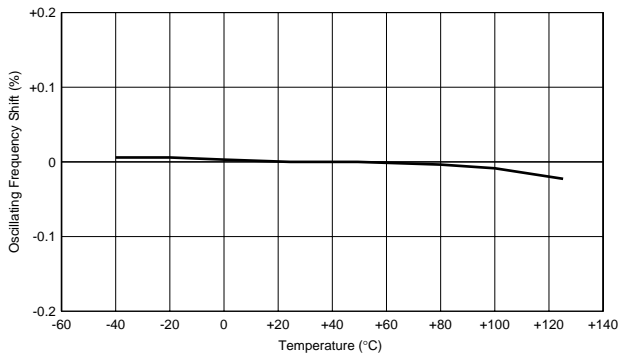
CSTCE\_G



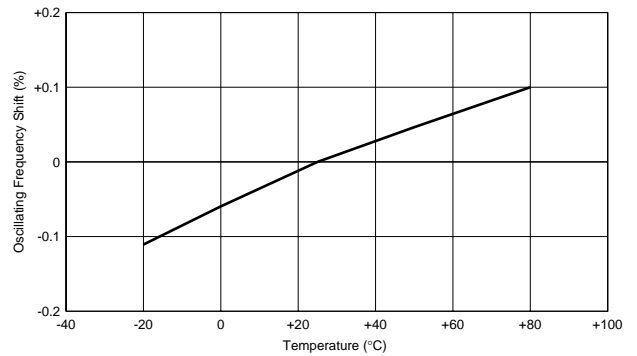
CSTCE\_V



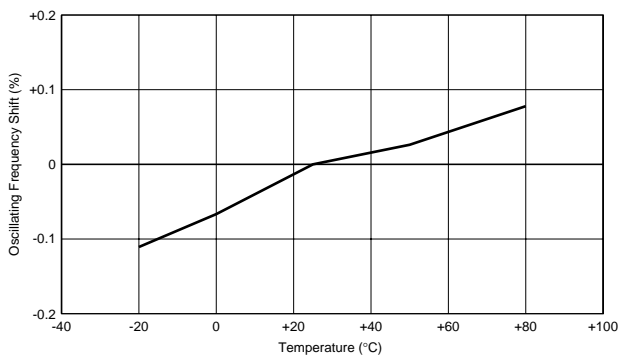
CSTCG\_V



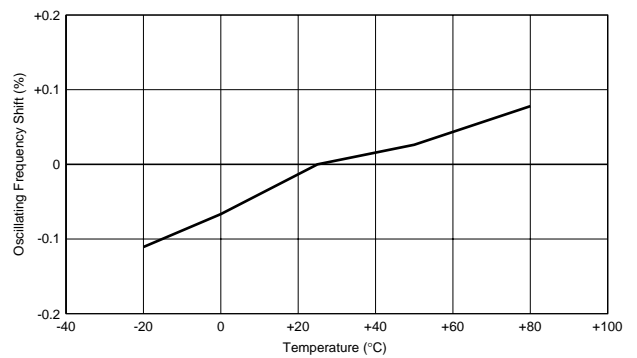
CSACW\_X



CSTCW\_X

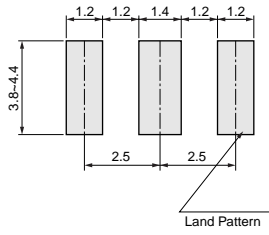


CSTCW\_X\_M



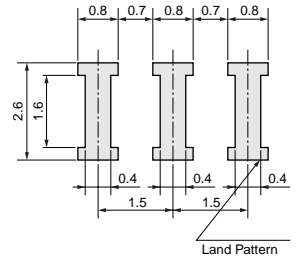
■ 标准焊盘布局尺寸

CSTCC\_G



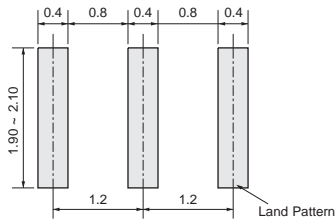
(in mm)

CSTCR\_G



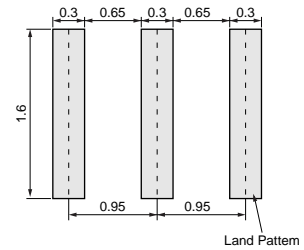
(in mm)

CSTCE\_G



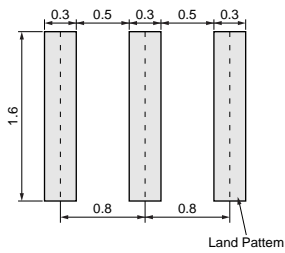
(in mm)

CSTCE\_V



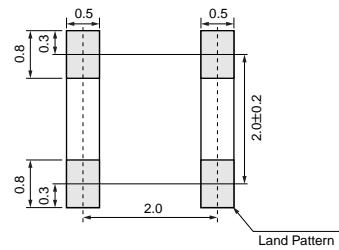
(in mm)

CSTCG\_V



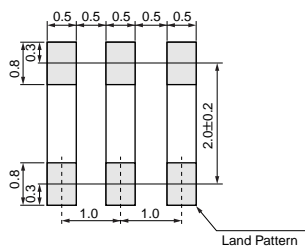
(in mm)

CSACW\_X



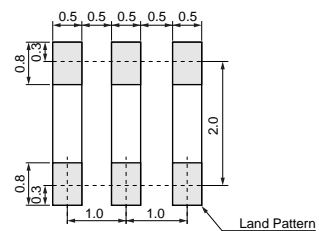
(in mm)

CSTCW\_X



(in mm)

CSTCW\_X\_M

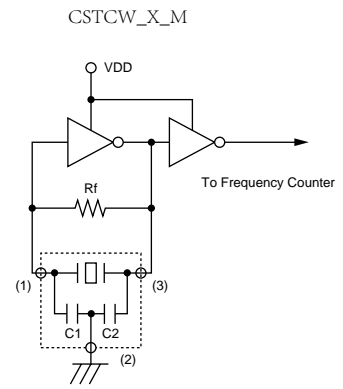
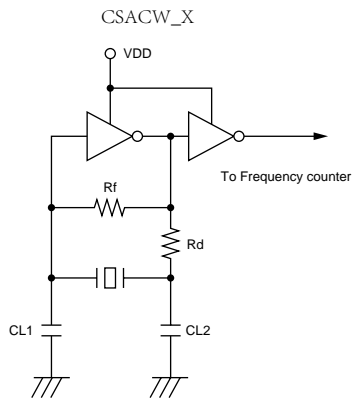


(in mm)

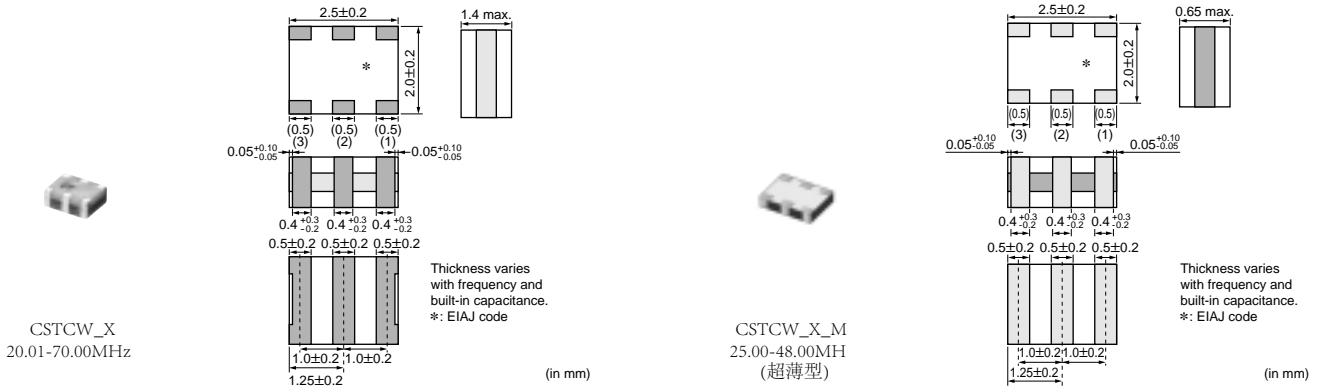
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■ 振荡频率测量电路



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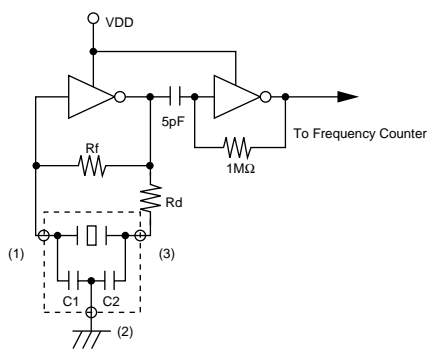


品名	振荡频率 (MHz)	初始偏差	温度稳定性 (%)	温度范围 (C)
<b>CSTCC_G</b>	2.00 to 3.99	±0.5%	±0.3 [±0.4%:Built-in Capacitance 47pF type within Freq.2.00 to 3.49MHz]	-20 to 80
<b>CSTCR_G</b>	4.00 to 7.99	±0.5%	±0.2	-20 to 80
<b>CSTCE_G</b>	8.00 to 13.99	±0.5%	±0.2	-20 to 80
<b>CSTCE_V</b>	14.00 to 20.00	±0.5%	±0.3	-20 to 80
<b>CSTCG_V</b>	20.00 to 33.86	±0.5%	±0.3	-20 to 80
<b>CSACW_X</b>	20.01 to 70.00	±0.5%	±0.2	-20 to 80
<b>CSTCW_X</b>	20.01 to 70.00	±0.5%	±0.2	-20 to 80
<b>CSTCW_X_M</b>	25.00 to 48.00	±0.5%	±0.2	-20 to 80

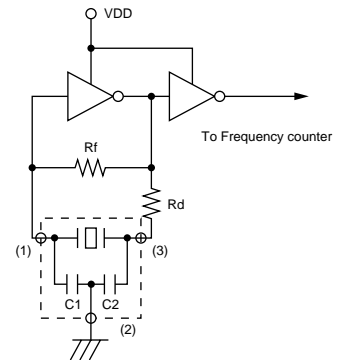
在不匹配的电路条件下，可能发生不规则振荡或停止振荡。请在使用前检查实际条件。

### ■ 振荡频率测量电路

CSTCR\_G/CSTCE\_G/CSTCE\_V/CSTCG\_V



CSTCC\_G/CSTCW\_X



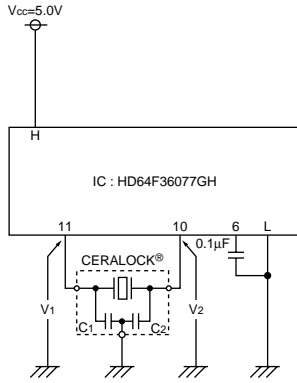
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# 应用电路

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## ■ HD64F36077GH (Renesas)

16位微型计算机

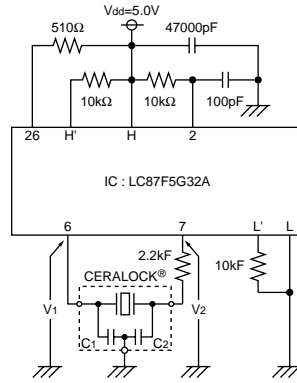


H: 3, 7, 12  
L: 8, 9

CERALOCK®: CSTCE8M00G52-R0  
C1=10pF (Typ.)  
C2=10pF (Typ.)

## ■ LC87F5G32A (Sanyo)

8位微型计算机

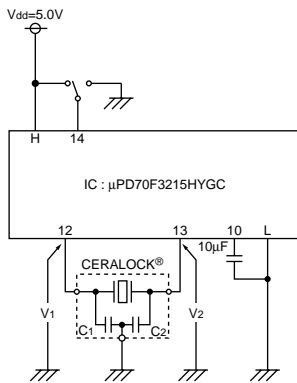


H: 8, 19, 39  
L: 5, 20, 40  
H': 29, 31, 35  
L': 30, 32-34, 36

CERALOCK®: CSTLS5M00G53-B0  
C1=15pF (Typ.)  
C2=15pF (Typ.)

## ■ uPD70F3215HYGC (NEC Electronics)

32位微型计算机

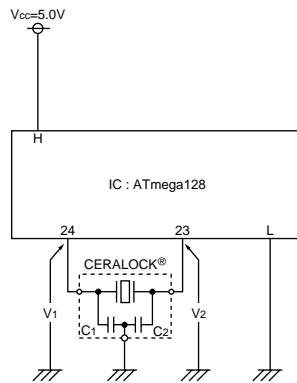


H: 1, 5, 9, 34, 70  
L: 2, 8, 11, 33, 69

CERALOCK®: CSTCR5M00G55-R0  
C1=39pF (Typ.)  
C2=39pF (Typ.)

## ■ ATmega128 (Atmel)

8位微型计算机

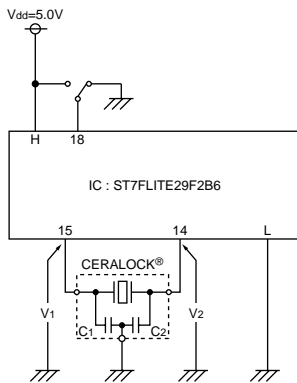


H: 21, 52, 64  
L: 22, 53, 63

CERALOCK®: CSTCE8M00G52-R0  
C1=10pF (Typ.)  
C2=10pF (Typ.)

## ■ ST7FLITE29F2B6 (ST Microelectronics)

8位微型计算机

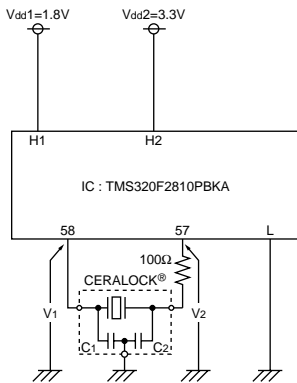


H: 17  
L: 16

CERALOCK®: CSTCE16M0V53-R0  
C1=15pF (Typ.)  
C2=15pF (Typ.)

## ■ TMS320F2810PBKA (Texas Instruments)

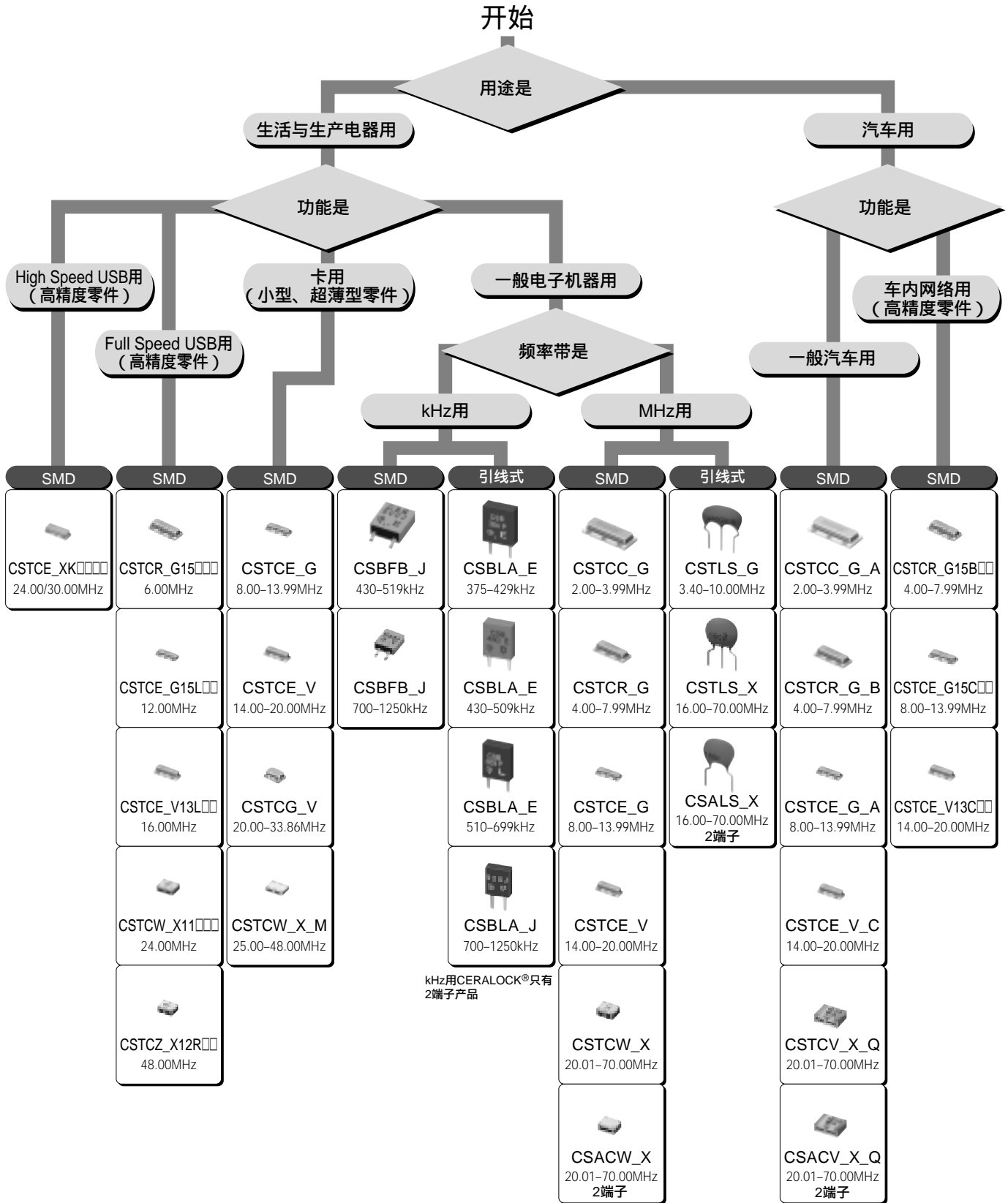
32位微型计算机



H1: 20, 29, 42, 56, 63, 74, 82, 94, 99,  
100, 102, 110, 114  
H2: 1, 13, 14, 25, 49, 52, 83, 104, 118  
L: 12, 15, 17, 26, 30, 39, 53, 59, 62, 73,  
88, 95, 103, 109, 115, 117, 128

CERALOCK®: CSTCE15M0V53-R0  
C1=15pF (Typ.)  
C2=15pF (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。