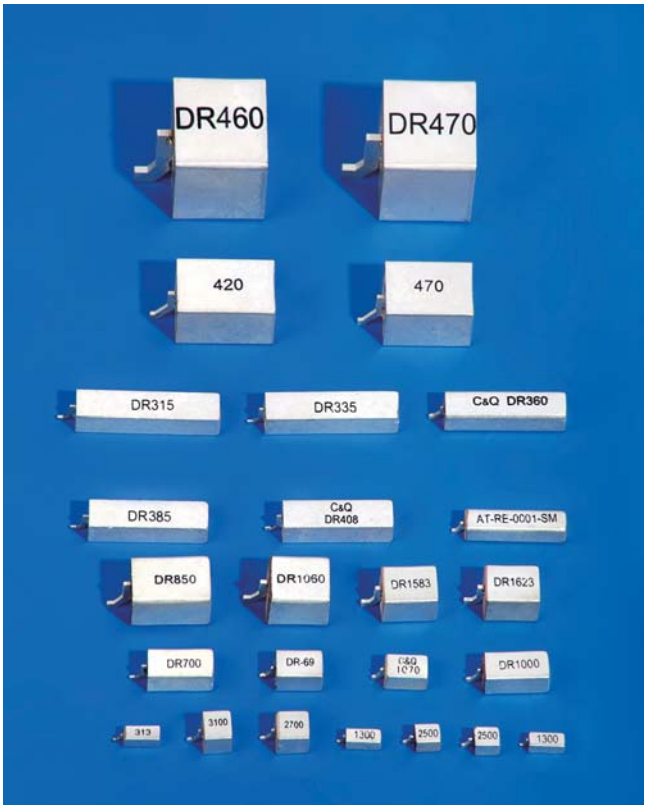
TEM模式介质谐振器

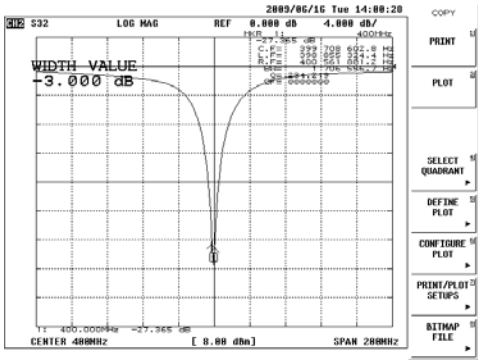
TEM Mode Dielectric Resonator

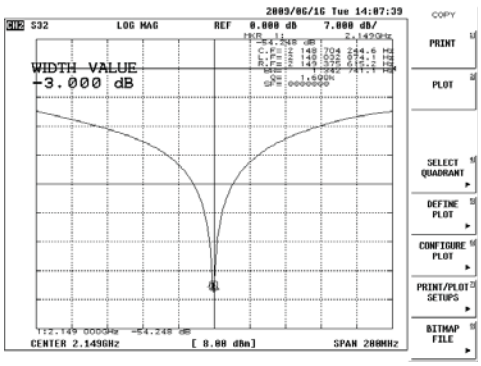
CAIQIN ELECTRONICS

–For wireless telecommunication, mobile telecommunication, power supply resonator, wireless tone equipment, duplexer, filter, etc.
–适用于无线通讯、移动通讯、电源振荡器、无线话音设备、双工器、滤波器的装配等。

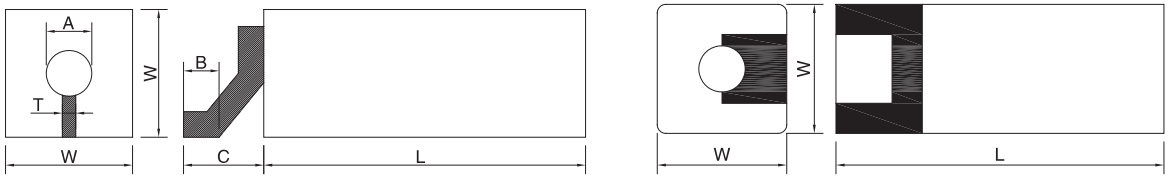


Typical Characteristic (波形特性)





Dimension (尺寸)（Unit:mm）



◆ Principal Parameters(主要参数)

Part项目 / Type类型	W(O/D) 边宽(mm)	A(I/D) 内孔直径(mm)	B 引脚焊点宽度(mm)	C 引脚长度(mm)	T 引脚厚度(mm)
D120	12.0±0.2	①φ4.0±0.2	Without tab	/	/
		②φ3.55±0.2	1.5	3.2	1.0
D100	10.0±0.2	①φ3.3±0.2	1.3	3.0	1.0
D80	8.0±0.2	①φ2.7±0.2	1.3	2.6	0.7
D60	6.0±0.2	①φ2.5±0.2	without tab	/	/
		②φ2.2±0.2			
		③φ2.0±0.2	1.2	2.4	0.7
D50	5.0±0.2	①φ1.8±0.2	1.0	2.2	0.6
		②φ1.5±0.2			
D40	4.0±0.1	①φ1.8±0.1	0.8	1.8	0.6
		②φ1.5±0.1	without tab	/	/
		③φ1.2±0.1			
D30	3.0±0.1	①φ1.0±0.1	0.7	1.5	0.5
D20	2.0±0.1	①φ0.6±0.1	0.5	1.2	0.5

Note:The data for reference only, Design it as customer's request.以上参数仅作为参考，可根据用户要求设计。

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◆ Available Range of TEM Mode Resonators(TEM模式谐振器特性范围)

Material 材料	Dielectric Constant 介电常数	Tf[1] 频率温度稳定性	Type 类型	Characteristic Impedance(Ω) 阻抗	Wave Length 波长	Frequency Range(MHz) 频率范围	Q[2] (min) 品质因素
A Series A系列	20±1	0±10	D120	①15 ②17	λ/4	800~1300	1000
					λ/2	1600~2700	800
			D100	16	λ/4	800~1300	700
					λ/2	1600~3200	800
			D080	15	λ/4	1000~3200	650
					λ/2	2000~3000	700
			D060	①12 ②14 ③15	λ/4	1000~2700	550
					λ/2	2000~3000	600
			D050	①14 ②17	λ/4	1300~3000	450
					λ/2	2500~4000	500
			D040	①11 ②14 ③17	λ/4	1300~4000	380
					λ/2	2500~4000	400
			D030	15	λ/4	1900~4000	320
			D020	17	λ/4	2800~5000	250
B Series B系列	36±1	0±10	D120	①12 ②13	λ/4	600~1000	700
					λ/2	1200~2400	900
			D100	12	λ/4	600~1200	600
					λ/2	1200~2400	800
			D080	12	λ/4	800~1500	500
					λ/2	1600~3000	700
			D060	①10 ②11 ③12	λ/4	800~1800	450
					λ/2	1600~3500	550
			D050	①11 ②13	λ/4	800~1800	380
					λ/2	1600~3500	450
			D040	①9 ②11 ③13	λ/4	1000~2700	320
					λ/2	2000~4800	400
			D030	12	λ/4	1300~300.00	220
			D020	13	λ/4	1300~3000	220
C Series C系列	80±2	0±10	D120	①7 ②8	λ/4	400~800	650
					λ/2	800~1500	700
			D100	7	λ/4	600~800	550
					λ/2	1200~2400	650
			D080	7	λ/4	440~1000	450
					λ/2	1000~1500	550
			D060	①6 ②7 ③7	λ/4	440~1300	400
					λ/2	1000~2200	470
			D050	①7 ②8	λ/4	500~1800	380
					λ/2	1000~3000	450
			D040	①6 ②7 ③8	λ/4	900~1600	200
					λ/2	2000~4800	300
			D030	7	λ/4	900~1600	250
			D020	8	λ/4	900~1600	150

Note:The data for reference only, Design it as customer's request.以上参数仅作为参考，可根据用户要求设计。

1)Frequency stability of temperature 频率温度稳定性
2)Q value depends on lower limit of frequency range Q值是指频率范围下限时所测值

Method of Definition (命名方式)

C&Q DR □□ (___) □
① ② ③ ④ ⑤

① C&Q
② Dielectric resonator
③ Dimension
④ Center frequency(MHz)
⑤ N
T

①C&Q
②介质谐振器
③边长
④中心频率
⑤无引脚
⑥有引脚

1/2波长，长度计算公式
$L=C/2fo\sqrt{\varepsilon r}$ (入/2)
L: Lenght of resontor
C: Constant ($3*10^5$)
fo:Resonator Frequency
εr: Dielectric constant
阻抗计算公式
$Zo=\frac{138}{\sqrt{\varepsilon r}} \times \log\frac{1.08xW}{A}$
εr: Dielectric constant
W:O/D
A:I/D

1/4波长，长度计算公式
$L=C/4fo\sqrt{\varepsilon r}$ (入/4)
L: 谐振器长度
C: 常数（光速）
fo:谐振器频率
εr: 介电常数

εr: 介电常数
W: 边宽
A:内孔直径

Operation instructions (使用说明)

TEM模安装时需注意焊装面的边线和谐振面的接地边需重合，否则会影响频率。

TEM mode resonator installation should pay attention to welding side edges and resonator’s ground side edges to be coincidence, otherwise it will affect the frequency