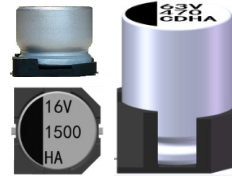


CDHA Series

- Surface Mount Products 表面贴装型产品
- 105°C 10000 h Guaranteed Products. 10000 小时保证产品
- AEC-Q200 Compliant. 符合 AEC-Q200
- Low ESR, high ripple, high withstand voltage.
具有低阻抗、高纹波、高耐压特性
- Providing ϕ 6.3、 ϕ 8、 ϕ 10 vibration-resistant products (30g) .
可以提供 ϕ 6.3、 ϕ 8、 ϕ 10 耐振动品 (30g)
- RoHS Compliant 满足 RoHS 要求
- High temperature lead-free reflow soldering products. 高温无铅回流焊对应产品



Electrical Characteristics 电气特性

Item 项目		Charateristics 特性
Operating temperature Range 环境温度范围		-55°C ~ +105°C
Rated Voltage Range 额定电压范围		16V ~ 100V
Capacitance Range 静电容量范围		22 μ F ~ 1500 μ F
Capacitance Tolerance 静电容量允许偏差		$\pm 20\%$ (120 Hz / +20 °C)
Leakage Current 漏电流 (20°C)		$I \leq 0.01 CV$ (μ A), 2min , CV = (capacitance μ F) x (rated voltage V)
Dissipation Factor 损耗角正切值		Please refer to STANDARD RATINGS 请参照规格一览表
Equivalent Series Resistance 阻抗		Please refer to STANDARD RATINGS 请参照规格一览表
Surge Voltage 浪涌电压		Please refer to STANDARD RATINGS 请参照规格一览表
Load life 耐久性	Life time 寿命时间	10000h
	Test temp 试验温度	105°C
	ΔC 电容量变化率	$\leq \pm 30\%$ of initial value 初始值
	$\tan \delta$ 损耗角正切值	$\leq 200\%$ of the initial standard value 初始标准值
	ESR 等效串联电阻	$\leq 200\%$ of the initial standard value 初始标准值
	LC 漏电流	Not more than the initial standard value 不大于初始标准值
Shelf life 高温储存	105°C 1000hours no voltage applied, the capacitor shall meet the specified limits for "Load Life", After test: UR to be applied for 30 minutes, 24 to 48 hours before measurement. 105°C 不施加电压储存 1000 小时, 电性能不超过耐久性试验标准。试验后: 施加额定电压 30 分钟后, 放置 24-48 小时后测试。	
Bias Humidity Test 高温高湿	At +85 °C ± 2 °C , 85 to 90 %RH, apply the rated voltage to the capacitor for 2000 hours and satisfy the following conditions. 在 +85 °C ± 2 °C , 85 ~ 90 %RH 的情况下, 对电容施加额定电压 2000 小时, 满足下列条件。	
	ΔC 电容量变化率	Within $\pm 30\%$ of initial value 初始值 $\pm 30\%$ 以内
	$\tan \delta$ 损耗角正切值	$\leq 200\%$ of the initial standard value 不大于初始标准值的 200 %
	ESR 等效串联电阻	$\leq 200\%$ of the initial standard value 不大于初始标准值的 200 %
LC 漏电流	Not more than the initial standard value 不大于初始标准值	
Resistance Soldering Heat 耐焊接热	After reflow soldering and then being stabilized at normal temperature, capacitor shall meet the following limits. 通过回流焊焊接, 恢复至常温后, 应满足下述各项规定。	
	ΔC 电容量变化率	Within $\pm 10\%$ of initial value 初始值 $\pm 10\%$ 以内
	ESR 等效串联电阻	Not more than the initial standard value 不大于初始标准值
LC 漏电流	Not more than the initial standard value 不大于初始标准值	

CDHA SERIES

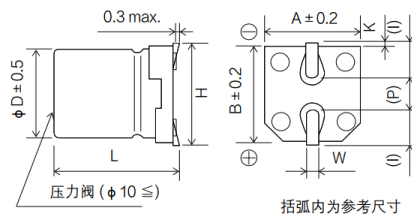
MULTIPLIER FOR RIPPLE CURRENT 纹波电流校正系数

Frequency coefficient 频率系数

频率 (Hz) 标称容量 (uF)	120	1K	5K	10K	20K	30K	100K~500K
22~33	0.07	0.3	0.5	0.6	0.7	0.75	1.0
47~180	0.1	0.4	0.6	0.7	0.8	0.8	1.0
≥220	0.13	0.45	0.65	0.75	0.85	0.85	1.0

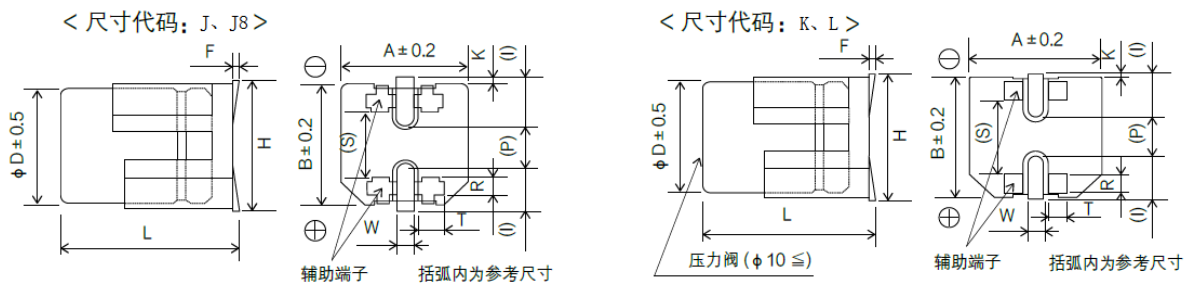
DIMENSIONS 尺寸 (mm)

Standard 标准品



尺寸代码 Size code	ϕD	L	A,B	H max	I	W	P	K
H	5.0	5.8 ± 0.3	5.3	6.5	2.2	0.65 ± 0.1	1.5	0.35 ^{+0.15} _{-0.20}
J	6.3	5.8 ± 0.3	6.3	7.8	2.6	0.65 ± 0.1	1.8	0.35 ^{+0.15} _{-0.20}
J8	6.3	7.7 ± 0.3	6.3	7.8	2.6	0.65 ± 0.1	1.8	0.35 ^{+0.15} _{-0.20}
K	8.0	10.2 ± 0.3	8.3	10.0	3.4	0.90 ± 0.2	3.1	0.70 ± 0.20
L	10.0	10.2 ± 0.3	10.3	12.0	3.5	0.90 ± 0.2	4.6	0.70 ± 0.20

Vibration Resistant Product 耐振产品



尺寸代码 Size code	ϕD	L	A,B	H max	F	I	W	P	K	R	S	T
J	6.3	6.1 ± 0.3	6.6	7.8	0~+0.15	2.4	0.65 ± 0.1	2.2	0.35 ^{+0.15} _{-0.20}	1.1 ± 0.2	3.3	1.05 ± 0.2
J8	6.3	8.0 ± 0.3	6.6	7.8	0~+0.15	2.4	0.65 ± 0.1	2.2	0.35 ^{+0.15} _{-0.20}	1.1 ± 0.2	3.3	1.05 ± 0.2
K	8.0	10.5 ± 0.3	8.3	10.0	0~+0.15	3.4	1.2 ± 0.2	3.1	0.7 ± 0.2	0.7 ± 0.2	5.3	1.3 ± 0.2
L	10.0	10.5 ± 0.3	10.3	12.0	0~+0.15	3.5	1.2 ± 0.2	4.6	0.7 ± 0.2	0.7 ± 0.2	6.9	1.03 ± 0.2

CDHA SERIES STANDARD RATINGS

U _R 标称电压 (SV) 浪涌电压 Code 代码	标准品 Standard	耐振动 品 Vi- bration resistant product	标称容量 Cap (μF)	产品尺寸 (mm) Dimensions			损耗角 tan δ	等效串联 电阻 ESR	纹波 电流 Rc	料号 * Part No
				ΦD	L					
					标准品 Standard	振动品 Vibrator	+20℃ 120Hz %	+20℃ 100KHz mΩ	+105℃ 100KHz mA rms	
16 (20) 1C	●	●	100	6.3	5.8	6.1	16	50	1300	ECV1CHA101MT1AJ6R1V
	●	●	150	6.3	5.8	6.1	16	50	1300	ECV1CHA151MT1AJ6R1V
	●	●	220	6.3	7.7	8.0	16	30	2000	ECV1CHA221MT1AJ008V
	●	●	270	6.3	7.7	8.0	16	30	2000	ECV1CHA271MT1AJ008V
	●	●	330	8.0	10.5	10.8	16	25	2300	ECV1CHA331MT2BK10EV
	●	●	470	8.0	10.5	10.8	16	25	2300	ECV1CHA471MT2BK10EV
	●	●	560	10.0	10.5	10.8	16	18	2500	ECV1CHA561MT2CL10EV
	●	●	680	10.0	10.5	10.8	16	18	2500	ECV1CHA681MT2CL10EV
	●	●	820	10.0	12.5	12.8	16	16	2800	ECV1CHA821MT2CL12EV
	●	●	1500	10.0	16.5	16.8	16	10	5000	ECV1CHA152MT2CL16EV
25 (32) 1E	●		33	5.0	5.8		14	80	900	ECV1EHA330MT1MH5R8S
	●		47	5.0	5.8		14	80	1300	ECV1EHA470MT1MH5R8S
	●	●	56	6.3	5.8	6.1	14	50	1300	ECV1EHA560MT1AJ6R1V
	●	●	68	6.3	5.8	6.1	14	50	2000	ECV1EHA680MT1AJ6R1V
	●	●	82	6.3	7.7	8.0	14	30	2000	ECV1EHA820MT1AJ008V
	●	●	100	6.3	7.7	8.0	14	30	2000	ECV1EHA101MT1AJ008V
	●	●	150	8.0	10.5	10.8	14	26	2300	ECV1EHA151MT2BK10EV
	●	●	220	8.0	10.5	10.8	14	26	2300	ECV1EHA221MT2BK10EV
	●	●	270	10.0	10.5	10.8	14	20	2500	ECV1EHA271MT2CL10EV
	●	●	330	10.0	10.5	10.8	14	20	2500	ECV1EHA331MT2CL10EV
	●	●	470	10.0	12.5	12.8	14	14	2800	ECV1EHA471MT2CL12EV
	●	●	560	10.0	12.5	12.8	14	14	2800	ECV1EHA561MT2CL12EV
●	●	680	10.0	16.5	16.8	14	10	3100	ECV1EHA681MT2CL16EV	
35 (44) 1V	●		22	5.0	5.8		12	100	900	ECV1VHA220MT1MH5R8S
	●		27	5.0	5.8		12	100	1300	ECV1VHA270MT1MH5R8S
	●	●	33	6.3	5.8	6.1	12	60	1300	ECV1VHA330MT1AJ6R1V
	●	●	47	6.3	5.8	6.1	12	60	1300	ECV1VHA470MT1AJ6R1V
	●	●	56	6.3	7.7	8.0	12	35	2000	ECV1VHA560MT1AJ008V
	●	●	68	6.3	7.7	8.0	12	35	2000	ECV1VHA680MT1AJ008V
	●	●	100	8.0	10.5	10.8	12	27	2300	ECV1VHA101MT2BK10EV
	●	●	150	8.0	10.5	10.8	12	27	2300	ECV1VHA151MT2BK10EV
	●	●	220	10.0	10.5	10.8	12	20	2500	ECV1VHA221MT2CL10EV
	●	●	270	10.0	10.5	10.8	12	20	2500	ECV1VHA271MT2CL10EV
	●	●	330	10.0	12.5	12.8	12	15	2800	ECV1VHA331MT2CL12EV
	●	●	470	10.0	16.5	16.8	12	10	3100	ECV1VHA471MT2CL16EV
50 (63) 1H	●		10	5.0	5.8		10	120	750	ECV1HHA100MT1MH5R8S
	●	●	22	6.3	5.8	6.1	10	80	1100	ECV1HHA220MT1AJ6R1V
	●	●	33	6.3	7.7	8.0	10	40	1600	ECV1HHA330MT1AJ008V
	●	●	47	8.0	10.5	10.8	10	30	1800	ECV1HHA470MT2BK10EV

CDHA SERIES STANDARD RATINGS

U _R 标称电压 (SV) 浪涌电压 Code 代码	标准品 Standard	耐振动 品 Vi- bration resistant product	标称容量 Cap (μF)	产品尺寸 (mm) Dimensions			损耗角 tan δ	等效串联 电阻 ESR	纹波 电流 Rc	料号* Part No
				φD	L					
					标准品 Standard	振动品 Vibrator	%	mΩ	mA rms	
50 (63) 1H	●	●	56	8.0	10.5	10.8	10	30	1800	ECV1HHA560MT2BK10EV
	●	●	68	8.0	10.5	10.8	10	30	1800	ECV1HHA680MT2BK10EV
	●	●	82	10.0	10.5	10.8	10	28	2000	ECV1HHA820MT2CL10EV
	●	●	100	10.0	10.5	10.8	10	120	2000	ECV1HHA101MT2CL10EV
	●	●	120	10.0	12.5	12.8	10	24	2200	ECV1HHA121MT2CL12EV
63 (79) 1J	●	●	10	6.3	5.8	6.1	8	120	1000	ECV1JHA100MT1AJ6R1V
	●	●	22	6.3	7.7	8.0	8	80	1500	ECV1JHA220MT1AJ008V
	●	●	33	8.0	10.5	10.8	8	40	1700	ECV1JHA330MT2BK10EV
	●	●	47	8.0	10.5	10.8	8	40	1700	ECV1JHA470MT2BK10EV
	●	●	56	10.0	10.5	10.8	8	30	1800	ECV1JHA560MT2CL10EV
	●	●	68	10.0	10.5	10.8	8	30	1800	ECV1JHA680MT2CL10EV
	●	●	82	10.0	10.5	10.8	8	30	1800	ECV1JHA820MT2CL10EV
80 (100) 1K	●	●	22	8.0	10.5	10.8	8	45	1550	ECV1KHA220MT2BK10EV
	●	●	27	8.0	10.5	10.8	8	45	1550	ECV1KHA270MT2BK10EV
	●	●	33	10.0	10.5	10.8	8	36	1700	ECV1KHA330MT2CL10EV
	●	●	47	10.0	10.5	10.8	8	36	1700	ECV1KHA470MT2CL10EV
	●	●	56	10.0	12.5	12.8	8	30	1800	ECV1KHA560MT2CL12EV
100 (125) 2A	●	●	22	8.0	10.5	10.8	8	50	1580	ECV2AHA220MT2BK10EV
	●	●	27	10.0	10.5	10.8	8	40	1580	ECV2AHA270MT2CL10EV
	●	●	33	10.0	12.5	12.8	8	36	1750	ECV2AHA330MT2CL12EV

* 料号最后一位可选择 S 或 V, 选择 V 仅针对具有耐振动的产品。