

SMH 系列

标准品

RoHS指令
适应品

- 保证 85°C 2,000 小时。(叠加纹波电流)
- 请注意不属于基板清洗类型。

SMM p251
小型化
长寿命化
SMH

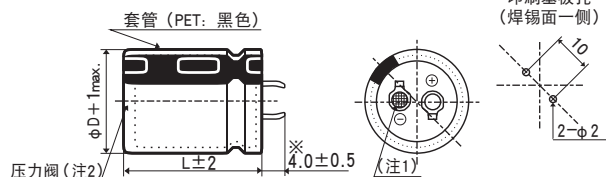


规格表

项 目	性 能										
工作温度范围	-40~+85°C										
额定电压范围	6.3~100Vdc										
静电容量容许差	±20%(M) (20°C、120Hz)										
漏电流	I ≤ 0.02CV 或者 3mA 中任意一个较小值 I: 漏电流 (μA)、C: 静电容量 (μF)、Vdc: 额定电压 (Vdc) (20°C、5分值)										
损失角正切值 (tan δ)	额定电压 (Vdc)	6.3V	10V	16V	25V	35V	50V	63V	80V	100V	(20°C、120Hz)
	tan δ (Max.)	0.60	0.50	0.40	0.30	0.25	0.20	0.15	0.15	0.15	
温度特性 (阻抗比 Max右表值)	额定电压 (Vdc)	6.3V	10V	16V	25V	35V	50V	63V	80V	100V	(120Hz)
	Z(-25°C) / Z(+20°C)	4	4	4	3	3	2	2	2	2	
	Z(-40°C) / Z(+20°C)	15	15	15	10	8	6	6	5	5	
耐久性	在85°C环境中, 不超过额定电压的范围内下叠加额定纹波电流, 连续加载额定电压2,000小时后, 待温度恢复到20°C进行测量时, 应满足以下要求。										
	静电容量变化率	≤ 初始值的 ±20%									
	损失角正切值	≤ 初始规格值的 200%									
	漏电流	≤ 初始规格值									
高温无负荷特性	在85°C环境中, 无负荷放置1,000小时后待温度恢复到20°C, 进行试验前处理 (JIS C 5101-4 4.1项) 后进行测量时, 应满足以下要求。										
	静电容量变化率	≤ 初始值的 ±20%									
	损失角正切值	≤ 初始规格值的 150%									
	漏电流	≤ 初始规格值									

尺寸图 (CE692形) [mm]

● 端子代码: VS (φ22 ~ φ35): 标准品

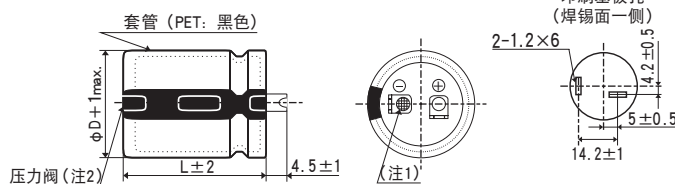


※ φ35 品为 3.5 ± 0.5。

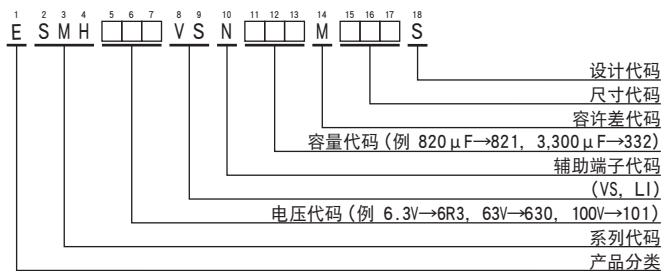
(注1) 阴极端子的铆钉部网眼刻印。

(注2) 标准规格为「无树脂板」。

● 端子代码: LI (φ35)



产品型号体系



产品型号代码的详细介绍请参考「产品型号的表示方法 (基板自立型)」。

SMH 系列

◆标准品一览表

WV (Vdc)	Cap (μF)	尺寸 φD×L(mm)	tan δ	额定纹波电流 (Arms/85°C, 120Hz)	产品型号	WV (Vdc)	Cap (μF)	尺寸 φD×L(mm)	tan δ	额定纹波电流 (Arms/85°C, 120Hz)	产品型号	
6.3	15,000	22×25	0.60	2.44	ESMH6R3VSN153MP25S	16	27,000	25.4×45	0.40	4.72	ESMH160VSN273MQ45S	
	18,000	22×30	0.60	2.67	ESMH6R3VSN183MP30S		27,000	30×35	0.40	4.82	ESMH160VSN273MR35S	
	18,000	25.4×25	0.60	2.70	ESMH6R3VSN183MQ25S		27,000	35×30	0.40	4.65	ESMH160VSN273MA30S	
	22,000	22×30	0.60	3.06	ESMH6R3VSN223MP30S		33,000	25.4×50	0.40	5.33	ESMH160VSN333MQ50S	
	22,000	25.4×25	0.60	3.07	ESMH6R3VSN223MQ25S		33,000	30×40	0.40	5.36	ESMH160VSN333MR40S	
	27,000	22×35	0.60	3.49	ESMH6R3VSN273MP35S		33,000	35×30	0.40	5.15	ESMH160VSN333MA30S	
	27,000	25.4×30	0.60	3.52	ESMH6R3VSN273MQ30S		39,000	30×45	0.40	6.01	ESMH160VSN393MR45S	
	27,000	30×25	0.60	3.57	ESMH6R3VSN273MR25S		39,000	35×35	0.40	5.95	ESMH160VSN393MA35S	
	33,000	22×40	0.60	3.97	ESMH6R3VSN333MP40S		47,000	30×50	0.40	6.79	ESMH160VSN473MR50S	
	33,000	25.4×35	0.60	4.02	ESMH6R3VSN333MQ35S		47,000	35×40	0.40	6.76	ESMH160VSN473MA40S	
	33,000	30×25	0.60	3.95	ESMH6R3VSN333MR25S		56,000	35×45	0.40	7.62	ESMH160VSN563MA45S	
	39,000	22×50	0.60	4.55	ESMH6R3VSN393MP50S		68,000	35×50	0.40	8.63	ESMH160VSN683MA50S	
	39,000	25.4×40	0.60	4.50	ESMH6R3VSN393MQ40S		25	5,600	22×25	0.30	2.21	ESMH250VSN562MP25S
	39,000	30×30	0.60	4.45	ESMH6R3VSN393MR30S			6,800	22×30	0.30	2.40	ESMH250VSN103MP30S
	39,000	35×25	0.60	4.51	ESMH6R3VSN393MA25S			6,800	25.4×25	0.30	2.56	ESMH250VSN682MQ25S
	47,000	25.4×45	0.60	5.09	ESMH6R3VSN473MQ45S			8,200	22×35	0.30	2.72	ESMH250VSN822MP35S
	47,000	30×35	0.60	5.06	ESMH6R3VSN473MR35S	8,200		25.4×25	0.30	2.80	ESMH250VSN822MQ25S	
	47,000	35×30	0.60	5.01	ESMH6R3VSN473MA30S	10,000		22×40	0.30	3.09	ESMH250VSN103MP40S	
	56,000	25.4×50	0.60	5.71	ESMH6R3VSN563MQ50S	10,000		25.4×30	0.30	3.12	ESMH250VSN103MQ30S	
	56,000	30×40	0.60	5.70	ESMH6R3VSN563MR40S	10,000		30×25	0.30	3.21	ESMH250VSN103MR25S	
	56,000	35×30	0.60	5.77	ESMH6R3VSN563MA30S	12,000		22×45	0.30	3.48	ESMH250VSN123MP45S	
	68,000	30×45	0.60	6.48	ESMH6R3VSN683MR45S	12,000		25.4×35	0.30	3.43	ESMH250VSN123MQ35S	
	68,000	35×35	0.60	6.42	ESMH6R3VSN683MA35S	12,000		30×30	0.30	3.86	ESMH250VSN123MR30S	
	82,000	30×50	0.60	7.32	ESMH6R3VSN823MR50S	12,000		35×25	0.30	3.54	ESMH250VSN123MA25S	
	82,000	35×40	0.60	7.29	ESMH6R3VSN823MA40S	15,000		22×50	0.30	4.00	ESMH250VSN153MP50S	
	100,000	35×45	0.60	8.31	ESMH6R3VSN104MA45S	15,000		25.4×40	0.30	3.95	ESMH250VSN153MQ40S	
	10	12,000	22×25	0.50	2.39	ESMH100VSN123MP25S		15,000	30×30	0.30	4.00	ESMH250VSN153MR30S
		15,000	22×30	0.50	2.76	ESMH100VSN153MP30S		15,000	35×25	0.30	3.95	ESMH250VSN153MA25S
15,000		25.4×25	0.50	2.77	ESMH100VSN153MQ25S	18,000		25.4×45	0.30	4.45	ESMH250VSN183MQ45S	
18,000		22×35	0.50	3.12	ESMH100VSN183MP35S	18,000		30×35	0.30	4.46	ESMH250VSN183MR35S	
18,000		25.4×25	0.50	3.04	ESMH100VSN183MQ25S	18,000		35×30	0.30	4.63	ESMH250VSN183MA30S	
22,000		22×40	0.50	3.55	ESMH100VSN223MP40S	22,000		25.4×50	0.30	5.02	ESMH250VSN223MQ50S	
22,000		25.4×30	0.50	3.48	ESMH100VSN223MQ30S	22,000		30×45	0.30	5.21	ESMH250VSN223MR45S	
22,000		30×25	0.50	3.53	ESMH100VSN223MR25S	22,000		35×35	0.30	5.16	ESMH250VSN223MA35S	
27,000		22×45	0.50	4.04	ESMH100VSN273MP45S	27,000		30×50	0.30	5.94	ESMH250VSN273MR50S	
27,000		25.4×35	0.50	3.98	ESMH100VSN273MQ35S	27,000		35×40	0.30	5.92	ESMH250VSN273MA40S	
27,000		30×30	0.50	3.73	ESMH100VSN273MR30S	33,000	35×45	0.30	6.75	ESMH250VSN333MA45S		
27,000		35×25	0.50	3.73	ESMH100VSN273MA25S	39,000	35×50	0.30	7.56	ESMH250VSN393MA50S		
33,000		22×50	0.50	4.58	ESMH100VSN333MP50S	35	3,900	22×25	0.25	2.22	ESMH350VSN392MP25S	
33,000		25.4×40	0.50	4.54	ESMH100VSN333MQ40S		4,700	22×30	0.25	2.41	ESMH350VSN472MP30S	
33,000		30×30	0.50	4.13	ESMH100VSN333MR30S		4,700	25.4×25	0.25	2.42	ESMH350VSN472MQ25S	
33,000		35×25	0.50	4.13	ESMH100VSN333MA25S		5,600	22×35	0.25	2.75	ESMH350VSN562MP35S	
39,000		25.4×45	0.50	5.08	ESMH100VSN393MQ45S		5,600	25.4×25	0.25	2.64	ESMH350VSN562MQ25S	
39,000		30×35	0.50	5.05	ESMH100VSN393MR35S		6,800	22×40	0.25	2.80	ESMH350VSN682MP40S	
39,000		35×30	0.50	4.80	ESMH100VSN393MA30S		6,800	25.4×30	0.25	2.74	ESMH350VSN682MQ30S	
47,000		25.4×50	0.50	5.73	ESMH100VSN473MQ50S		6,800	30×25	0.25	2.97	ESMH350VSN682MR25S	
47,000		30×40	0.50	5.72	ESMH100VSN473MR40S		8,200	22×45	0.25	3.47	ESMH350VSN822MP45S	
47,000		35×30	0.50	5.27	ESMH100VSN473MA30S		8,200	25.4×35	0.25	3.10	ESMH350VSN822MQ35S	
56,000		30×45	0.50	6.44	ESMH100VSN563MR45S		8,200	30×30	0.25	3.13	ESMH350VSN822MR30S	
56,000		35×35	0.50	6.38	ESMH100VSN563MA35S		8,200	35×25	0.25	2.73	ESMH350VSN822MA25S	
68,000		30×50	0.50	7.27	ESMH100VSN683MR50S		10,000	22×50	0.25	3.57	ESMH350VSN103MP50S	
68,000		35×40	0.50	7.27	ESMH100VSN683MA40S		10,000	25.4×40	0.25	3.53	ESMH350VSN103MQ40S	
82,000		35×50	0.50	8.49	ESMH100VSN823MA50S		10,000	30×30	0.25	3.46	ESMH350VSN103MR30S	
16		8,200	22×25	0.40	2.51		ESMH160VSN822MP25S	10,000	35×25	0.25	3.02	ESMH350VSN103MA25S
	10,000	22×25	0.40	2.77	ESMH160VSN103MP25S		12,000	25.4×45	0.25	3.98	ESMH350VSN123MQ45S	
	12,000	22×30	0.40	2.86	ESMH160VSN123MP30S		12,000	30×35	0.25	4.01	ESMH350VSN123MR35S	
	12,000	25.4×25	0.40	2.95	ESMH160VSN123MQ25S		12,000	35×30	0.25	4.42	ESMH350VSN123MA30S	
	15,000	22×35	0.40	3.29	ESMH160VSN153MP35S		15,000	25.4×50	0.25	4.54	ESMH350VSN153MQ50S	
	15,000	25.4×30	0.40	3.46	ESMH160VSN153MQ30S		15,000	30×40	0.25	4.52	ESMH350VSN153MR40S	
	15,000	30×25	0.40	3.66	ESMH160VSN153MR25S		15,000	35×35	0.25	5.01	ESMH350VSN153MA35S	
	18,000	22×40	0.40	3.72	ESMH160VSN183MP40S		18,000	30×45	0.25	4.71	ESMH350VSN183MR45S	
	18,000	25.4×35	0.40	3.98	ESMH160VSN183MQ35S		18,000	35×40	0.25	5.54	ESMH350VSN183MA40S	
	18,000	30×25	0.40	4.00	ESMH160VSN183MR25S	22,000	30×50	0.25	5.33	ESMH350VSN223MR50S		
	22,000	22×50	0.40	4.37	ESMH160VSN223MP50S	22,000	35×45	0.25	6.04	ESMH350VSN223MA45S		
	22,000	25.4×40	0.40	4.26	ESMH160VSN223MQ40S	27,000	35×50	0.25	6.89	ESMH350VSN273MA50S		
	22,000	30×30	0.40	4.21	ESMH160VSN223MR30S	50	2,200	22×25	0.20	1.91	ESMH500VSN222MP25S	
	22,000	35×25	0.40	4.15	ESMH160VSN223MA25S		3,300	22×30	0.20	2.37	ESMH500VSN332MP30S	

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◆标准品一览表

WV (Vdc)	Cap (μF)	尺寸 φD×L(mm)	tan δ	额定纹波电流 (Arms/85℃,120Hz)	产品型号	WV (Vdc)	Cap (μF)	尺寸 φD×L(mm)	tan δ	额定纹波电流 (Arms/85℃,120Hz)	产品型号
50	3,300	25.4×25	0.20	2.38	ESMH500VSN332MQ25S	80	1,200	22×25	0.15	1.69	ESMH800VSN122MP25S
	3,900	22×35	0.20	2.65	ESMH500VSN392MP35S		1,500	22×25	0.15	1.88	ESMH800VSN152MP25S
	3,900	25.4×30	0.20	2.68	ESMH500VSN392MQ30S		1,800	22×30	0.15	2.14	ESMH800VSN182MP30S
	3,900	30×25	0.20	2.55	ESMH500VSN392MR25S		1,800	25.4×25	0.15	2.26	ESMH800VSN182MQ25S
	4,700	22×40	0.20	2.99	ESMH500VSN472MP40S		2,200	22×35	0.15	2.44	ESMH800VSN222MP35S
	4,700	25.4×35	0.20	3.03	ESMH500VSN472MQ35S		2,200	25.4×30	0.15	2.46	ESMH800VSN222MQ30S
	4,700	30×25	0.20	2.81	ESMH500VSN472MR25S		2,200	30×25	0.15	2.49	ESMH800VSN222MR25S
	5,600	22×45	0.20	3.36	ESMH500VSN562MP45S		2,700	22×40	0.15	2.78	ESMH800VSN272MP40S
	5,600	25.4×35	0.20	3.31	ESMH500VSN562MQ35S		2,700	25.4×35	0.15	2.81	ESMH800VSN272MQ35S
	5,600	30×30	0.20	3.37	ESMH500VSN562MR30S		2,700	30×25	0.15	2.75	ESMH800VSN272MR25S
	5,600	35×25	0.20	3.42	ESMH500VSN562MA25S		3,300	22×45	0.15	3.16	ESMH800VSN332MP45S
	6,800	22×50	0.20	3.81	ESMH500VSN682MP50S		3,300	25.4×40	0.15	3.21	ESMH800VSN332MQ40S
	6,800	25.4×40	0.20	3.81	ESMH500VSN682MQ40S		3,300	30×30	0.15	3.17	ESMH800VSN332MR30S
	6,800	30×35	0.20	3.85	ESMH500VSN682MR35S		3,300	35×25	0.15	3.21	ESMH800VSN332MA25S
	6,800	35×30	0.20	3.85	ESMH500VSN682MA30S		3,900	22×50	0.15	3.52	ESMH800VSN392MP50S
	8,200	25.4×50	0.20	4.37	ESMH500VSN822MQ50S		3,900	25.4×45	0.15	3.59	ESMH800VSN392MQ45S
	8,200	30×40	0.20	4.36	ESMH500VSN822MR40S		3,900	30×35	0.15	3.57	ESMH800VSN392MR35S
	8,200	35×30	0.20	4.41	ESMH500VSN822MA30S		3,900	35×25	0.15	3.50	ESMH800VSN392MA25S
10,000	30×45	0.20	4.97	ESMH500VSN103MR45S	4,700	25.4×50	0.15	4.05	ESMH800VSN472MQ50S		
10,000	35×35	0.20	4.92	ESMH500VSN103MA35S	4,700	30×40	0.15	4.05	ESMH800VSN472MR40S		
12,000	30×50	0.20	5.60	ESMH500VSN123MR50S	4,700	35×30	0.15	4.09	ESMH800VSN472MA30S		
12,000	35×40	0.20	5.58	ESMH500VSN123MA40S	5,600	30×45	0.15	4.55	ESMH800VSN562MR45S		
15,000	35×45	0.20	6.44	ESMH500VSN153MA45S	5,600	35×35	0.15	4.51	ESMH800VSN562MA35S		
18,000	35×50	0.20	6.71	ESMH500VSN183MA50S	6,800	30×50	0.15	5.16	ESMH800VSN682MR50S		
63	1,800	22×25	0.15	1.82	ESMH630VSN182MP25S	100	820	22×25	0.15	1.86	ESMH101VSN821MP25S
	2,200	22×30	0.15	2.31	ESMH630VSN222MP30S		1,200	22×30	0.15	2.09	ESMH101VSN122MP30S
	2,200	25.4×25	0.15	2.30	ESMH630VSN222MQ25S		1,200	25.4×25	0.15	2.10	ESMH101VSN122MQ25S
	2,700	22×35	0.15	2.40	ESMH630VSN272MP35S		1,500	22×35	0.15	2.41	ESMH101VSN152MP35S
	2,700	25.4×25	0.15	2.40	ESMH630VSN272MQ25S		1,500	25.4×30	0.15	2.43	ESMH101VSN152MQ30S
	3,300	22×35	0.15	2.62	ESMH630VSN332MP35S		1,500	30×25	0.15	2.46	ESMH101VSN152MR25S
	3,300	25.4×30	0.15	2.64	ESMH630VSN332MQ30S		1,800	22×40	0.15	2.71	ESMH101VSN182MP40S
	3,300	30×25	0.15	2.78	ESMH630VSN332MR25S		1,800	25.4×35	0.15	2.75	ESMH101VSN182MQ35S
	3,900	22×40	0.15	2.93	ESMH630VSN392MP40S		1,800	30×25	0.15	2.72	ESMH101VSN182MR25S
	3,900	25.4×35	0.15	2.97	ESMH630VSN392MQ35S		2,200	22×45	0.15	3.08	ESMH101VSN222MP45S
	3,900	30×30	0.15	3.00	ESMH630VSN392MR30S		2,200	25.4×40	0.15	3.13	ESMH101VSN222MQ40S
	3,900	35×25	0.15	3.00	ESMH630VSN392MA25S		2,200	30×30	0.15	3.09	ESMH101VSN222MR30S
	4,700	22×50	0.15	3.39	ESMH630VSN472MP50S		2,200	35×25	0.15	3.14	ESMH101VSN222MA25S
	4,700	25.4×40	0.15	3.36	ESMH630VSN472MQ40S		2,700	22×50	0.15	3.53	ESMH101VSN272MP50S
	4,700	30×30	0.15	3.32	ESMH630VSN472MR30S		2,700	25.4×45	0.15	3.57	ESMH101VSN272MQ45S
	4,700	35×25	0.15	3.36	ESMH630VSN472MA25S		2,700	30×35	0.15	3.55	ESMH101VSN272MR35S
	5,600	25.4×45	0.15	3.77	ESMH630VSN562MQ45S		2,700	35×30	0.15	3.71	ESMH101VSN272MA30S
	5,600	30×35	0.15	3.75	ESMH630VSN562MR35S		3,300	25.4×50	0.15	4.06	ESMH101VSN332MQ50S
	5,600	35×30	0.15	3.76	ESMH630VSN562MA30S		3,300	30×40	0.15	4.05	ESMH101VSN332MR40S
	6,800	25.4×50	0.15	4.27	ESMH630VSN682MQ50S		3,300	35×30	0.15	4.05	ESMH101VSN332MA30S
	6,800	30×40	0.15	4.27	ESMH630VSN682MR40S		3,900	30×45	0.15	4.54	ESMH101VSN392MR45S
	6,800	35×30	0.15	4.15	ESMH630VSN682MA30S		3,900	35×35	0.15	4.49	ESMH101VSN392MA35S
	8,200	30×45	0.15	4.83	ESMH630VSN822MR45S		4,700	30×50	0.15	5.13	ESMH101VSN472MR50S
	8,200	35×35	0.15	4.79	ESMH630VSN822MA35S		4,700	35×40	0.15	5.11	ESMH101VSN472MA40S
10,000	30×50	0.15	5.49	ESMH630VSN103MR50S	5,600	35×45	0.15	5.75	ESMH101VSN562MA45S		
10,000	35×40	0.15	5.47	ESMH630VSN103MA40S	6,800	35×50	0.15	6.50	ESMH101VSN682MA50S		
12,000	35×45	0.15	6.19	ESMH630VSN123MA45S							

※160Vdc 以上的使用 SMQ 系列。

◆额定纹波电流频率修正系数

纹波频率与标准品一览表的规定值相异时，请使用小于乘以下表系数所得之值的值。

●频率修正系数

频率 (Hz)	50	120	300	1k	10k	50k
6.3~50Vdc	0.95	1.00	1.03	1.05	1.08	1.08
63~100Vdc	0.92	1.00	1.07	1.13	1.19	1.20

※ 铝电解电容器由于在纹波电流叠加时自我发热、温度上升而老化，每升温 5℃寿命减少一半。要想保持长寿命请在使用过程中降低纹波电流。