

H5 SERIES

SMK®

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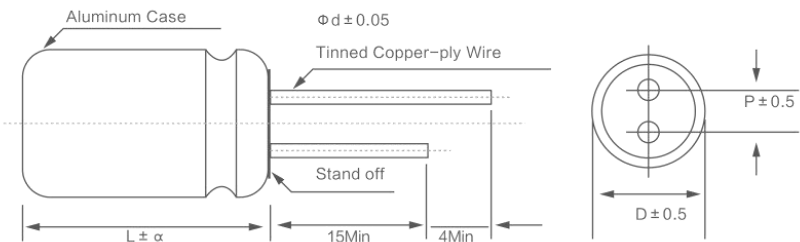
Low ESR, high ripple current, high voltage
long life, Load life of 5000 hours at 105°C



規格表 Specifications

項目Items	特性參數Characteristics	
使用溫度範圍 Category Temperature Range	-55 ~ +105°C	
額定工作電壓範圍 Rated Voltage Range	35 ~ 100V	
靜電容量允許偏差 Capacitance tolerance	±20%(M) (at 20°C, 120Hz)	
漏電流 Leakage Current	施加額定工作電壓 2 分鐘後讀數, 小于或等于規格值 (at 20°C) $I \leq 0.1CV$ 或 $299 \mu A$ (取大值) Less than or equal to the specified value. After 2 minutes application of rated Voltage at 20°C	
損耗角正切值 $\tan \delta$ Dissipation Factor	Rated voltage (V) $\tan \delta$ (Max.)	35~100 0.12 (at 20°C, 120Hz)
溫度特性 Low Temperature Characteristics (Max. Impedance Ratio)	$Z(-25^\circ\text{C})/Z(+20^\circ\text{C}) \leq 1.25$ $Z(-55^\circ\text{C})/Z(+20^\circ\text{C}) \leq 1.25$ (100KHz)	
耐久性 Endurance	105°C 施加額定工作電壓 5000 小時, 恢復到 20°C 後, 產品性能應滿足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20°C after application of rated voltage for 2000 hours at 105°C.	
耐濕負荷特性 Damp Heat (Steady State)	Appearance	No significant damage
	Capacitance change	$\leq \pm 20\%$ of the initial value
	D.F. ($\tan \delta$)	$\leq 150\%$ of the specified value
	ESR	$\leq 150\%$ of the specified value
	Leakage current	$\leq$ The specified value
浪涌電壓特性 (Surge Voltage)	在 60°C 溫度, 濕度 90%~95%RH 的環境中, 施加額定電壓 1000 小時後, 恢復到 20°C 後, 產品性能應滿足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20°C after application of rated voltage for 1000 hours at 60°C, 90% ~ 95% RH.	
	Appearance	No significant damage
	Capacitance change	$\leq \pm 20\%$ of the initial value
	D.F. ($\tan \delta$)	$\leq 150\%$ of the specified value
	ESR	$\leq 150\%$ of the specified value
浪涌電壓特性 (Surge Voltage)	浪涌電壓 = 額定電壓 $\times 1.15(V)$ Surge Voltage = Rated voltage $\times 1.15(V)$ 在 105°C 環境中, 按充電 30 秒; 放電 5 分 30 秒, 連續施加浪涌電壓 1000 次 ($R_c=1k\Omega$), 待恢復後測試, 應滿足以下要求 The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages specified at 105°C for 30 seconds through a protective resistor ($R_c=1k\Omega$) and discharge for 5 minutes 30 seconds	
	Appearance	No significant damage
	Capacitance change	$\leq \pm 20\%$ of the initial value
	D.F. ($\tan \delta$)	$\leq 150\%$ of the specified value
	ESR	$\leq 150\%$ of the specified value
	Leakage current	$\leq$ The specified value

外形圖 Dimensions (mm)



ϕD	5	6.3	8	10
P	2.0	2.5	3.5	5.0
ϕd	0.5	0.6	0.6	0.6

α	($L < 16$) 1.0
	($16 \leq L < 22$) 1.5
	($L \geq 22$) 2.0

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紋波電流補正係數 Rated Ripple Current Coefficient

頻率Frequency(Hz)	120Hz $\leq$ f < 1kHz	1kHz $\leq$ f < 10kHz	10kHz $\leq$ f < 100kHz	100kHz $\leq$ f < 500kHz
係數Coefficient	0.05	0.30	0.70	1.00

尺寸與個技術參數一覽表Standard Ratings

Rated voltage (V)	Rated capacitance (μ F)	Case size Φ D $\times$ L(mm)	ESR(m Ω) at 20°C, 100 KHz	Leakage Current (μ A)	Rated ripple current (mA _{rms} /105°C/100kHz)
35	10	5*8	120	299	1100
	22	6.3*8	100	299	1350
	33	5*8	120	299	1100
	39	6.3*8	90	299	1350
	39	8*9	60	299	1800
	47	6.3*8	80	299	1350
	47	8*9	60	299	1800
	56	6.3*8	80	299	1350
	56	8*9	60	299	1800
	68	6.3*8	70	299	1500
	68	8*9	50	299	2000
	82	6.3*11	60	299	1800
	82	8*9	40	299	2000
	100	8*9	40	350	2000
	150	8*12	35	525	2500
	220	10*12.5	30	770	2900
	330	10*12.5	30	1155	2900
50	10	5*8	120	299	550
	15	6.3*8	100	299	800
	22	6.3*8	100	299	850
	33	8*9	50	299	1300
	33	8*12	40	299	1500
	39	8*9	50	299	1300
	39	8*12	40	299	1500
	47	8*12	40	299	1500
	56	8*12	40	299	1500
	82	10*12.5	35	410	2100
	100	10*12.5	3535	500	2100

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尺寸與個技術參數一覽表Standard Ratings

Rated voltage (V)	Rated capacitance (μF)	Case size Φ D × L (mm)	ESR(mΩ) at 20°C, 100 KHz	Leakage Current (μ A)	Rated ripple current (mA rms/105°C/100kHz)
	10	5*8	120	299	500
63	15	6.3*8	100	299	750
	22	6.3*8	100	299	750
	33	8*9	55	299	1100
	39	8*9	55	299	1100
	47	8*12	45	299	1300
	56	8*12	45	353	1300
	82	10*12.5	38	517	1800
	100	10*12.5	38	630	1800
80	10	6.3*8	120	299	550
	15	6.3*8	120	299	550
	22	8*9	80	299	1100
	22	8*12	60	299	1300
	33	10*12.5	45	299	1700
	39	10*12.5	45	312	1700
	47	10*12.5	45	376	1800
	56	10*12.5	45	448	1800
100	10	8*9	90	299	850
	15	8*12	70	299	1190
	22	10*12.5	60	299	1550
	33	10*12.5	60	330	1550