SA series

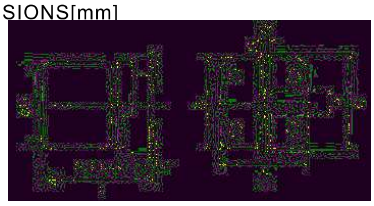
- Endurance: +125°C 4,000 hours
- Low ESR, high ripple current resistant
- **RoHS Compliant**

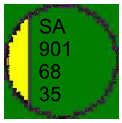
New

SPECIFICATIONS

Items	Characteristics							
Category Temperature Range	-55~+125°C							
Rated Working Voltage Range	25~80 Vdc							
Nominal Capacitance Range	15~470μF							
Capacitance Tolerance	±20%(M)							(at 20°C,120Hz)
DC Leakage Current	LC=0.01CV or 3(μA), whichever is greater.							(at 20°C after 2 minutes)
	Where, I:Max.leakage current (μA),C:Nominal capacitance (μF),V: Rated voltage (V)							
Dissipation Factor (tanδ)	Rated Voltage(Vdc)	25	35	50	63	80		(at 20°C,120Hz)
	tanδ (max.)	0.12						
ESR(100kHz,20°C)	Value in standard ratings							
Temperature Characteristic (Impedance Ratio at 100kHz)	Z(+125°C)/Z(+20°C)≤1.5 Z(-55°C)/Z(+20°C)≤2.0							
Endurance	After applying rated voltage with rated ripple current for 4,000 hours at 125°C, the capacitors shall meet the following requirements.							
	Appearance	No significant damage						
	Capacitance Change	≤±30% of the initial value						
	D.F. (tanδ)	≤200% of the initial specified value						
	ESR	≤200% of the initial specified value						
	Leakage Current	≤The initial specified value						
High Temperature Storage (No-Load)	The requirements for the Endurance characteristics listed above shall be satisfied when the capacitors are restored to normal temperature after storing them for 2,000 hours under no-load at 125°C±2°C.							
Humidity Resistance (On-Load)	After applying rated voltage for 2,000 hours at 85°C±2°C and 85~90%RH, the capacitors shall meet the following requirements.							
	Appearance	No significant damage						
	Capacitance Change	≤±30% of the initial value						
	D.F. (tanδ)	≤200% of the initial specified value						
	ESR	≤200% of the initial specified value						
	Leakage Current	≤The initial specified value						

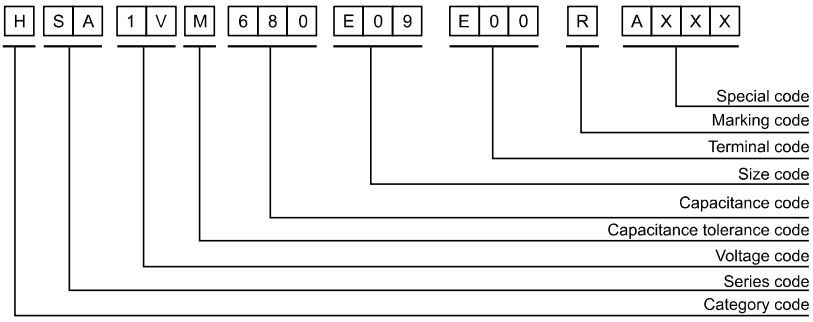
DIMENSIONS[mm]





Size Code	6.3	8	10
P±0.2	1.9	3.1	4.5
A±0.2	6.6	8.3	10.3
B±0.2	6.6	8.3	10.3
C±0.2	7.2	9.0	11.0
W	0.5~0.8	0.7~1.1	0.7~1.1
ØD'	ØD-0.1~+0.5		
L'	L±0.3	L±0.5	

PART NUMBERING SYSTEM



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STANDARD RATINGS

VDC (SV)	Cap (μF)	Size ΦDxL(mm)	ESR (mΩ,20°C,100kHz) (max.)	Rated ripple current (mArms/125°C,100kHz)	Leakage Current (μA)(max.)	Part Number
25 (28.8)	100	6.3×8	35	1200	25	HSA1EM101E08E00RAXXX
	220	8×10.5	27	1400	55	HSA1EM221FARE00RAXXX
	330	10×10.5	25	1800	82.5	HSA1EM331GARE00RAXXX
	470	10×10.5	20	2000	117.5	HSA1EM471GARE00RAXXX
35 (40.3)	47	6.3×8	40	1100	16.5	HSA1VM470E08E00RAXXX
	68	6.3×9	40	1200	23.8	HSA1VM680E09E00RAXXX
	120	8×10.5	35	1400	42	HSA1VM121FARE00RAXXX
	220	10×10.5	30	1800	77	HSA1VM221GARE00RAXXX
50 (57.5)	22	6.3×8	90	900	11	HSA1HM220E08E00RAXXX
	47	8×10.5	35	1100	23.5	HSA1HM470FARE00RAXXX
	100	10×10.5	35	1400	50	HSA1HM101GARE00RAXXX
63 (72.5)	15	6.3×9	100	800	9.5	HSA1JM150E09E00RAXXX
	33	8×10.5	50	1000	20.8	HSA1JM330FARE00RAXXX
	56	10×10.5	40	1200	35.3	HSA1JM560GARE00RAXXX
80 (92.0)	47	8×12.5	40	1000	37.6	HSA1BM470FCRE00RAXXX

Frequency Coefficient of Rated Ripple Current

Frequency(Hz)	120	1k	10k	100k≤
Coefficient	0.05	0.30	0.70	1.00