

# SXE Series

- Low impedance capacitors, operating temperature range from -55 to 105°C
- Solvent-proof type
- Pb-free design

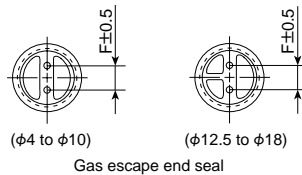
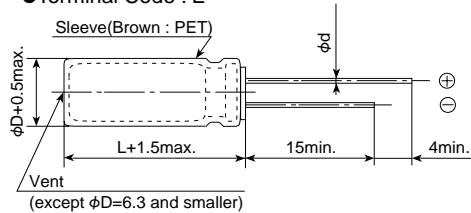


## ◆ SPECIFICATIONS

Items	Characteristics	
Category Temperature Range	-55 to +105°C	
Rated Voltage Range	6.3 to 100V <sub>dc</sub>	
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)	
Leakage Current	I=0.03CV (after 1 minute at 20°C) Where: I:Max. leakage current (µA), C:Nominal capacitance (µF), V:Rated voltage (V) I=0.01CV (after 2 minutes at 20°C)	
Dissipation factor (tanδ)	Rated voltage(V <sub>dc</sub> )	6.3 10 16 25 35 50 63 80 100
	tanδ (Max.)	0.22 0.19 0.16 0.14 0.12 0.10 0.08 0.08 0.07
Endurance	When nominal capacitance exceeds 1,000µF, add 0.02 to the value above for each 1,000µF increase. (at 20°C, 120Hz)	
	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for the specified period of lifetime at 105°C.	
	Lifetime	1,000 hours (φ4 to 8) 2,000 hours (φ10 to 18)
	Capacitance change	≤±20% of the initial value ≤±20% of the initial value
	D.F. (tanδ)	≤200% of the initial specified value ≤200% of the initial specified value
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied.	
	Capacitance change	≤±20% of the initial value
	D.F. (tanδ)	≤150% of the initial specified value
	Leakage current	≤the initial specified value

## ◆ DIMENSIONS [mm]

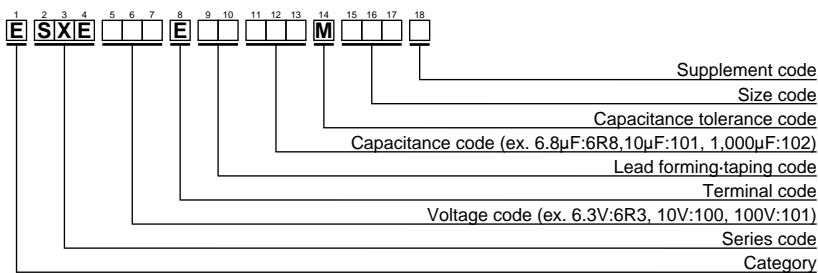
- Terminal Code : E



φD	4	5	6.3	8	10 & 12.5	16 & 18
φd	0.45	0.5*	0.5*	0.6	0.6	0.8
F	1.5	2.0	2.5	3.5	5.0	7.5

\*For L=7mm, φd is 0.45

## ◆ PART NUMBERING SYSTEM



Specifications in this bulletin are subject to change without notice.



◆STANDARD RATINGS

Table with 8 columns: WV (Vdc), Cap (µF), Case size (φD×L (mm)), Impedance (Zmax/100kHz) at 20°C and -10°C, Rated ripple current (mA/m Arms/105°C) at 100kHz and 120Hz, and Part No. It is divided into five main sections based on voltage ratings: 25V, 35V, 50V, 50V, and 80V.

□ □ : Lead forming / Taping code

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◆STANDARD RATINGS

VV (Vdc)	Cap (μF)	Case size φD×L (mm)	Impedance (Ωmax/ 100kHz)		Rated ripple current (mA <sub>rms</sub> /105°C)		Part No.	VV (Vdc)	Cap (μF)	Case size φD×L (mm)	Impedance (Ωmax/ 100kHz)		Rated ripple current (mA <sub>rms</sub> /105°C)		Part No.
			20°C	-10°C	100kHz	120Hz					20°C	-10°C	100kHz	120Hz	
			80	680	16×40	0.048					0.13	2,200	1,780	ESXE800E□□681ML40S	
	680	18×30	0.063	0.17	1,850	1,480	ESXE800E□□681MM30S	100	10×30	0.15	0.40	955	670	ESXE101E□□101MJ30S	
	820	18×35	0.06	0.16	1,990	1,595	ESXE800E□□821MM35S	100	12.5×20	0.15	0.40	890	625	ESXE101E□□101MK20S	
	1,000	18×40	0.044	0.12	2,370	1,900	ESXE800E□□102MM40S	120	12.5×25	0.13	0.36	1,040	730	ESXE101E□□121MK25S	
	1.5	4×7	10.8	29.2	38	15	ESXE101E□□1R5MD07D	120	16×15	0.14	0.38	960	675	ESXE101E□□121ML15S	
	2.7	5×7	4.9	13.2	61	24	ESXE101E□□2R7ME07D	150	18×15	0.12	0.33	1,130	795	ESXE101E□□151MM15S	
	3.3	4×11.5	4.1	11.1	73	29	ESXE101E□□3R3MDB5D	180	12.5×30	0.10	0.27	1,270	890	ESXE101E□□181MK30S	
	5.6	5×11.5	1.9	5.1	124	62	ESXE101E□□5R6MEB5D	180	16×20	0.11	0.30	1,240	870	ESXE101E□□181ML20S	
	5.6	6.3×7	2.8	7.6	95	48	ESXE101E□□5R6MF07D	220	12.5×35	0.087	0.23	1,450	1,015	ESXE101E□□221MK35S	
	8.2	5×15	1.3	3.6	170	85	ESXE101E□□8R2ME15D	220	16×25	0.086	0.23	1,440	1,010	ESXE101E□□221ML25S	
	12	6.3×11.5	1.1	3.0	180	90	ESXE101E□□120MFB5D	270	12.5×40	0.074	0.20	1,610	1,130	ESXE101E□□271MK40S	
	18	6.3×15	0.62	1.7	270	135	ESXE101E□□180MF15D	270	18×20	0.086	0.23	1,450	1,015	ESXE101E□□271MM20S	
	22	8×12	0.53	1.4	305	155	ESXE101E□□220MH12D	330	16×30	0.062	0.17	1,790	1,255	ESXE101E□□331ML30S	
	27	10×12.5	0.48	1.3	380	190	ESXE101E□□270MJC5S	330	18×25	0.074	0.20	1,650	1,155	ESXE101E□□331MM25S	
	33	8×15	0.35	0.95	410	205	ESXE101E□□330MH15D	390	16×35	0.059	0.16	1,990	1,595	ESXE101E□□391ML35S	
	33	10×15	0.33	0.89	500	250	ESXE101E□□330MJ15S	390	18×30	0.062	0.17	1,850	1,480	ESXE101E□□391MM30S	
	39	8×20	0.27	0.73	605	425	ESXE101E□□390MH20D	470	16×40	0.047	0.13	2,200	1,780	ESXE101E□□471ML40S	
	56	10×20	0.26	0.70	620	435	ESXE101E□□560MJ20S	560	18×35	0.053	0.14	2,000	1,600	ESXE101E□□561MM35S	
	68	10×25	0.19	0.50	795	560	ESXE101E□□680MJ25S	680	18×40	0.043	0.12	2,370	1,900	ESXE101E□□681MM40S	

□□ : Lead forming / Taping code

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance (μF)	Frequency (Hz)					
	50	120	300	1k	10k	100k
1.5 to 4.7	0.30	0.40	0.50	0.70	0.80	1.00
5.6 to 33	0.40	0.50	0.60	0.80	0.90	1.00
39 to 330	0.60	0.70	0.80	0.90	0.95	1.00
390 to 1,000	0.65	0.80	0.90	0.98	1.00	1.00
1,200	0.80	0.90	0.95	0.98	1.00	1.00