SXE Series

UNITED CHEMI-CON

- Miniature
- Solvent Proof
- Low Impedance
- Large Capacitance
- +105°C Maximum Temperature

The SXE series capacitors are designed for use in low impedance situations at high frequencies, switching power supplies for example. These capacitors have many characteristics that make them ideal for these situations, including a wide temperature range, large capacitance values and long life.

The SXE series capacitors were developed to withstand HCFC cleaning agents for five minutes by ultrasonic, vapor or immersion. This solvent proof design allows all circuit board components to be cleaned together, at the same time, without resorting to more expensive epoxy end-sealed capacitors. Refer to the Mini-Glossary for recommended cleaning conditions.

Summary of Specifications

- **Radial lead terminals.**
- **Capacitance range: 1.5 to 15,000µF.**
- **Voltage range: 6.3 to 100VDC.**
- **Operating temperature range: −55°C to +105°C.**
- **Leakage current: 0.03CV after 1 minute or 0.01CV after 2 minutes at +20°C.**
- **Standard capacitance tolerance: ±20%**
- **Nominal case size (D×L): 4×7mm to 18×40mm.**
- **Rated lifetime: 1,000 to 2,000 hours at +105°C depending on case size.**

SXE Specifications

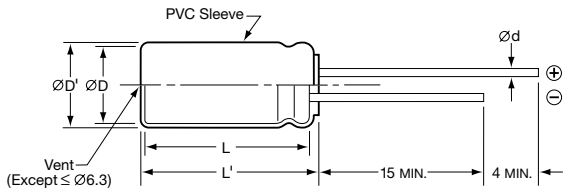
<table>
<tr><th>Item</th><th>Characteristics</th></tr>
<tr><td>Operating Temperature Range</td><td>−55 to +105°C</td></tr>
<tr><td>Rated Voltage Range</td><td>6.3 to 100VDC</td></tr>
<tr><td>Capacitance Range</td><td>1.5 to 15,000μF</td></tr>
<tr><td>Capacitance Tolerance</td><td>±20% (M) at +20°C, 120Hz</td></tr>
<tr><td>Leakage Current</td><td>I = 0.03CV after 1 minute at +20°C.
I = 0.01CV after 2 minutes at +20°C.
Where I = Leakage current (μA), C = Nominal capacitance (μF) and V = Rated voltage (V)</td></tr>
<tr><td>Dissipation Factor (Tan δ)</td><td>At +20°C, 120Hz
<table>
<tr><td>Rated Voltage (V)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>80</td><td>100</td></tr>
<tr><td>Tan δ (DF)</td><td>0.22</td><td>0.19</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.08</td><td>0.08</td><td>0.07</td></tr>
</table>
When nominal capacitance exceeds 1,000μF, add 0.02 to the values above for each 1,000μF increase.</td></tr>
<tr><td>Low Temperature Characteristics</td><td>Capacitance change:
At 120Hz, capacitance at −55°C shall not be less than 70% of the specified value at +20°C.
Impedance (Z) change:
At 120Hz, impedance at −55°C shall not exceed 3 times the specified value at +20°C.</td></tr>
<tr><td>Ripple Current Multipliers
Refer to Section 4 of the Mini-Glossary for explanation of Ripple Current Multipliers.</td><td>Ambient Temperature (°C)
<table>
<tr><td>+85°C</td><td>+105°C</td></tr>
<tr><td>1.75</td><td>1.00</td></tr>
</table>
Frequency (Hz)
<table>
<tr><td>Capacitance (μF)</td><td>50Hz</td><td>120Hz</td><td>300Hz</td><td>1kHz</td><td>10kHz</td><td>100kHz</td></tr>
<tr><td>≤ 4.7μF</td><td>0.30</td><td>0.40</td><td>0.50</td><td>0.70</td><td>0.80</td><td>1.00</td></tr>
<tr><td>5.6-33μF</td><td>0.40</td><td>0.50</td><td>0.60</td><td>0.80</td><td>0.90</td><td>1.00</td></tr>
<tr><td>39-330μF</td><td>0.60</td><td>0.70</td><td>0.80</td><td>0.90</td><td>0.95</td><td>1.00</td></tr>
<tr><td>390-1000μF</td><td>0.65</td><td>0.80</td><td>0.90</td><td>0.98</td><td>1.00</td><td>1.00</td></tr>
<tr><td>≥ 1200μF</td><td>0.80</td><td>0.90</td><td>0.95</td><td>0.98</td><td>1.00</td><td>1.00</td></tr>
</table></td></tr>
<tr><td>Load Life</td><td>The following specifications shall be satisfied when the capacitors are restored to +20°C after subjecting them to the DC rated voltage for the specified test time at +105°C. The sum of DC voltage and peak AC voltage must not exceed the full rated voltage of the capacitors.
Case Diameter — Test Time
Ø8mm & below — 1,000 hours
Ø10mm & above — 2,000 hours
Capacitance change: ≤ ±20% of initial measured value
Tan δ (DF) : ≤ 200% of initial specified value
Leakage current : ≤ initial specified value</td></tr>
<tr><td>Shelf Life</td><td>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. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements.
Capacitance change: ≤ ±20% of initial measured value
Tan δ (DF) : ≤ 200% of initial specified value
Leakage current : ≤ initial specified value</td></tr>
<tr><td>Others</td><td>Satisfies characteristic W of JIS C5141</td></tr>
</table>

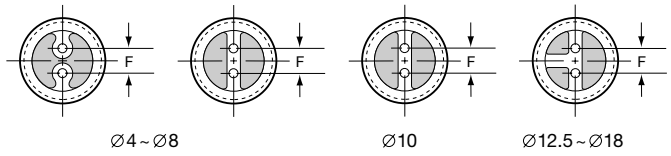
SXE Series

Diagram of Dimensions

VB/Radial Lead

Unit: mm





Gas escape end seal for all case diameters.

For optional lead configurations and tape and ammo packaging, refer to the beginning of the Miniature section.

ØD	ØD' max.	L' max.	Ød	F ± 0.5
4	ØD + 0.5	L + 1.5	0.45	1.5
5	ØD + 0.5	L + 1.5	0.5 (0.45)*	2.0
6.3	ØD + 0.5	L + 1.5	0.5 (0.45)*	2.5
8	ØD + 0.5	L + 1.5	0.6	3.5
10, 12.5	ØD + 0.5	L + 1.5	0.6	5.0
16, 18	ØD + 0.5	L + 1.5	0.8	7.5

*0.45 lead diameter for case sizes 5 × 7 and 6.3 × 7 (ØD × L).

Part Numbering System for SXE Series

When ordering, always specify complete catalog number for SXE Series.

SXE 25 VB 102 M 12X25 LL

- LL — Lead Length: LL is Standard.
- 12X25 — Case Code: See Case Sizes in Tables.
- M — Capacitance Tolerance: M = ±20%
- 102 — Capacitance Value: Expressed in Microfarads. The first two digits are significant figures, and the third digit indicates the number of zeros for capacitance of 100µF or more. R indicates the decimal point for capacitance less than 100µF (e.g. R10 = .10µF; 1R0 = 1.0µF; 10R = 10µF; 101 = 100µF; 102 = 1,000µF; 103 = 10,000µF).
- VB — Lead Configuration: VB = Radial Lead Terminals.
- 25 — DC Rated Voltage: Expressed in Volts (e.g. 25 = 25WVDC).
- SXE — Series Name: Indicates Basic Capacitor Design.

Standard Voltage Ratings - VB/Radial Lead

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum Impedance (Ω) at +20°C, 100kHz	Maximum Impedance (Ω) at −10°C, 100kHz	Maximum Ripple Current (mA rms) at +105°C, 100kHz
6.3 Volts 8 Volts Surge	27	SXE6.3VB27RM4X7LL	4 × 7	5.5	14.3	50
	56	SXE6.3VB56RM5X7LL	5 × 7	3.4	8.8	75
	68	SXE6.3VB68RM4X11LL	4 × 11.5	2.2	5.7	102
	120	SXE6.3VB121M5X11LL	5 × 11.5	1.3	3.4	154
	120	SXE6.3VB121M6X7LL	6.3 × 7	1.4	3.6	140
	150	SXE6.3VB151M5X15LL	5 × 15	0.92	2.4	210
	220	SXE6.3VB221M6X11LL	6.3 × 11.5	0.61	1.6	260
	330	SXE6.3VB331M6X15LL	6.3 × 15	0.4	1.0	350
	390	SXE6.3VB391M8X12LL	8 × 12	0.34	0.88	400
	470	SXE6.3VB471M10X12LL	10 × 12.5	0.28	0.73	510
	560	SXE6.3VB561M8X15LL	8 × 15	0.24	0.62	500
	680	SXE6.3VB681M10X15LL	10 × 15	0.22	0.57	635
	820	SXE6.3VB821M8X20LL	8 × 20	0.19	0.49	650
	1,200	SXE6.3VB122M10X20LL	10 × 20	0.14	0.36	860
	1,200	SXE6.3VB122M12X15LL	12.5 × 15	0.12	0.31	970

***The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.**

SXE Series

Standard Voltage Ratings - VB/Radial Lead

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D×L (mm)	Maximum Impedance (Ω) at +20°C, 100kHz	Maximum Impedance (Ω) at −10°C, 100kHz	Maximum Ripple Current (mA rms) at +105°C, 100kHz
6.3 Volts 8 Volts Surge	1,500	SXE6.3VB152M10X25LL	10 × 25	0.12	0.31	1,030
	2,200	SXE6.3VB222M10X30LL	10 × 30	0.095	0.25	1,150
	2,200	SXE6.3VB222M12X20LL	12.5 × 20	0.089	0.23	1,120
	2,200	SXE6.3VB222M16X15LL	16 × 15	0.10	0.26	1,100
	2,700	SXE6.3VB272M12X25LL	12.5 × 25	0.075	0.2	1,320
	3,300	SXE6.3VB332M18X15LL	18 × 15	0.081	0.21	1,280
	3,900	SXE6.3VB392M12X30LL	12.5 × 30	0.065	0.17	1,540
	3,900	SXE6.3VB392M16X20LL	16 × 20	0.076	0.2	1,370
	4,700	SXE6.3VB472M12X35LL	12.5 × 35	0.053	0.14	1,770
	5,600	SXE6.3VB562M12X40LL	12.5 × 40	0.046	0.12	1,980
	5,600	SXE6.3VB562M16X25LL	16 × 25	0.066	0.17	1,570
	5,600	SXE6.3VB562M18X20LL	18 × 20	0.063	0.16	1,580
	6,800	SXE6.3VB682M16X30LL	16 × 30	0.055	0.14	1,810
	6,800	SXE6.3VB682M18X25LL	18 × 25	0.054	0.14	1,830
	8,200	SXE6.3VB822M16X35LL	16 × 35	0.047	0.12	2,030
	10,000	SXE6.3VB103M16X40LL	16 × 40	0.039	0.1	2,320
	10,000	SXE6.3VB103M18X30LL	18 × 30	0.047	0.12	2,030
	12,000	SXE6.3VB123M18X35LL	18 × 35	0.042	0.11	2,240
	15,000	SXE6.3VB153M18X40LL	18 × 40	0.037	0.096	2,460
10 Volts 13 Volts Surge	22	SXE10VB22RM4X7LL	4 × 7	5.4	14	50
	39	SXE10VB39RM5X7LL	5 × 7	3.3	8.6	75
	47	SXE10VB47RM4X11LL	4 × 11.5	2.2	5.6	102
	82	SXE10VB82RM5X11LL	5 × 11.5	1.3	3.4	154
	82	SXE10VB82RM6X7LL	6.3 × 7	1.4	3.6	140
	120	SXE10VB121M5X15LL	5 × 15	0.91	2.4	210
	180	SXE10VB181M6X11LL	6.3 × 11.5	0.59	1.5	260
	270	SXE10VB271M6X15LL	6.3 × 15	0.39	1.0	350
	330	SXE10VB331M8X12LL	8 × 12	0.33	0.86	400
	390	SXE10VB391M10X12LL	10 × 12.5	0.27	0.7	510
	470	SXE10VB471M8X15LL	8 × 15	0.24	0.62	500
	560	SXE10VB561M8X20LL	8 × 20	0.18	0.47	650
	560	SXE10VB561M10X15LL	10 × 15	0.22	0.57	635
	820	SXE10VB821M10X20LL	10 × 20	0.14	0.36	860
	1,000	SXE10VB102M12X15LL	12.5 × 15	0.12	0.31	970
	1,200	SXE10VB122M10X25LL	10 × 25	0.12	0.31	1,030
	1,500	SXE10VB152M10X30LL	10 × 30	0.093	0.24	1,150
	1,500	SXE10VB152M16X15LL	16 × 15	0.10	0.26	1,100
	1,800	SXE10VB182M12X20LL	12.5 × 20	0.087	0.23	1,120
	2,200	SXE10VB222M12X25LL	12.5 × 25	0.073	0.19	1,320
	2,200	SXE10VB222M18X15LL	18 × 15	0.08	0.21	1,280
	2,700	SXE10VB272M12X30LL	12.5 × 30	0.064	0.17	1,540
	3,300	SXE10VB332M12X35LL	12.5 × 35	0.052	0.14	1,770
	3,300	SXE10VB332M16X20LL	16 × 20	0.075	0.2	1,370
	3,900	SXE10VB392M12X40LL	12.5 × 40	0.045	0.12	1,980
	3,900	SXE10VB392M16X25LL	16 × 25	0.065	0.17	1,570
	3,900	SXE10VB392M18X20LL	18 × 20	0.062	0.16	1,580
	4,700	SXE10VB472M16X30LL	16 × 30	0.054	0.14	1,810
	4,700	SXE10VB472M18X25LL	18 × 25	0.053	0.14	1,830
	6,800	SXE10VB682M16X35LL	16 × 35	0.046	0.12	2,030
	6,800	SXE10VB682M18X30LL	18 × 30	0.046	0.12	2,030
	8,200	SXE10VB822M16X40LL	16 × 40	0.038	0.099	2,320
	8,200	SXE10VB822M18X35LL	18 × 35	0.041	0.11	2,240
	10,000	SXE10VB103M18X40LL	18 × 40	0.037	0.096	2,460
16 Volts 20 Volts Surge	15	SXE16VB15RM4X7LL	4 × 7	5.3	13.8	50
	27	SXE16VB27RM5X7LL	5 × 7	3.3	8.6	75
	33	SXE16VB33RM4X11LL	4 × 11.5	2.1	5.5	102
	56	SXE16VB56RM5X11LL	5 × 11.5	1.3	3.4	154
	56	SXE16VB56RM6X7LL	6.3 × 7	1.4	3.6	140

***The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.**

SXE Series

Standard Voltage Ratings - VB/Radial Lead

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D×L (mm)	Maximum Impedance (Ω) at +20°C, 100kHz	Maximum Impedance (Ω) at −10°C, 100kHz	Maximum Ripple Current (mA rms) at +105°C, 100kHz
16 Volts **20 Volts Surge**	82	SXE16VB82RM5X15LL	5 × 15	0.89	2.3	210
	120	SXE16VB121M6X11LL	6.3 × 11.5	0.58	1.5	260
	180	SXE16VB181M6X15LL	6.3 × 15	0.38	0.99	350
	220	SXE16VB221M8X12LL	8 × 12	0.33	0.86	400
	270	SXE16VB271M10X12LL	10 × 12.5	0.27	0.70	510
	330	SXE16VB331M8X15LL	8 × 15	0.23	0.60	500
	390	SXE16VB391M10X15LL	10 × 15	0.21	0.55	635
	470	SXE16VB471M8X20LL	8 × 20	0.18	0.47	650
	680	SXE16VB681M10X20LL	10 × 20	0.14	0.36	860
	680	SXE16VB681M12X15LL	12.5 × 15	0.12	0.31	970
	820	SXE16VB821M10X25LL	10 × 25	0.12	0.31	1,030
	1,000	SXE16VB102M10X30LL	10 × 30	0.091	0.24	1,150
	1,200	SXE16VB122M12X20LL	12.5 × 20	0.086	0.22	1,120
	1,200	SXE16VB122M16X15LL	16 × 15	0.099	0.26	1,100
	1,500	SXE16VB152M12X25LL	12.5 × 25	0.072	0.19	1,320
	1,500	SXE16VB152M18X15LL	18 × 15	0.078	0.20	1,280
	2,200	SXE16VB222M12X30LL	12.5 × 30	0.063	0.16	1,540
	2,200	SXE16VB222M16X20LL	16 × 20	0.073	0.19	1,370
	2,700	SXE16VB272M12X35LL	12.5 × 35	0.051	0.13	1,770
	2,700	SXE16VB272M16X25LL	16 × 25	0.064	0.17	1,570
	3,300	SXE16VB332M12X40LL	12.5 × 40	0.045	0.12	1,980
	3,300	SXE16VB332M18X20LL	18 × 20	0.06	0.16	1,580
	3,900	SXE16VB392M16X30LL	16 × 30	0.053	0.14	1,810
	3,900	SXE16VB392M18X25LL	18 × 25	0.052	0.14	1,830
	4,700	SXE16VB472M16X35LL	16 × 35	0.046	0.12	2,030
	4,700	SXE16VB472M18X30LL	18 × 30	0.046	0.12	2,030
	5,600	SXE16VB562M16X40LL	16 × 40	0.037	0.096	2,320
	6,800	SXE16VB682M18X35LL	18 × 35	0.04	0.10	2,240
	8,200	SXE16VB822M18X40LL	18 × 40	0.036	0.094	2,460
25 Volts **32 Volts Surge**	10	SXE25VB10RM4X7LL	4 × 7	5.3	13.7	50
	22	SXE25VB22RM4X11LL	4 × 11.5	2.1	5.5	102
	22	SXE25VB22RM5X7LL	5 × 7	3.3	8.6	75
	39	SXE25VB39RM5X11LL	5 × 11.5	1.3	3.3	154
	39	SXE25VB39RM6X7LL	6.3 × 7	1.4	6.9	140
	56	SXE25VB56RM5X15LL	5 × 15	0.88	2.3	210
	82	SXE25VB82RM6X11LL	6.3 × 11.5	0.58	1.5	260
	120	SXE25VB121M6X15LL	6.3 × 15	0.38	0.99	350
	150	SXE25VB151M8X12LL	8 × 12	0.33	0.86	400
	180	SXE25VB181M10X12LL	10 × 12.5	0.26	0.68	510
	220	SXE25VB221M8X15LL	8 × 15	0.23	0.60	500
	270	SXE25VB271M8X20LL	8 × 20	0.18	0.47	650
	270	SXE25VB271M10X15LL	10 × 15	0.21	0.55	635
	470	SXE25VB471M10X20LL	10 × 20	0.14	0.36	860
	470	SXE25VB471M12X15LL	12.5 × 15	0.12	0.31	970
	560	SXE25VB561M10X25LL	10 × 25	0.12	0.31	1,030
	680	SXE25VB681M10X30LL	10 × 30	0.09	0.23	1,150
	820	SXE25VB821M12X20LL	12.5 × 20	0.085	0.22	1,120
	820	SXE25VB821M16X15LL	16 × 15	0.098	0.25	1,100
	1,000	SXE25VB102M12X25LL	12.5 × 25	0.071	0.18	1,320
	1,200	SXE25VB122M18X15LL	18 × 15	0.078	0.20	1,280
	1,500	SXE25VB152M12X30LL	12.5 × 30	0.062	0.16	1,540
	1,500	SXE25VB152M16X20LL	16 × 20	0.072	0.19	1,370
	1,800	SXE25VB182M12X35LL	12.5 × 35	0.05	0.13	1,770
	1,800	SXE25VB182M16X25LL	16 × 25	0.063	0.16	1,570
	2,200	SXE25VB222M12X40LL	12.5 × 40	0.044	0.11	1,980
	2,200	SXE25VB222M18X20LL	18 × 20	0.06	0.16	1,580
	2,700	SXE25VB272M16X30LL	16 × 30	0.053	0.14	1,810
	2,700	SXE25VB272M18X25LL	18 × 25	0.051	0.13	1,830

***The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.**

SXE Series

Standard Voltage Ratings - VB/Radial Lead

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D×L (mm)	Maximum Impedance (Ω) at +20°C, 100kHz	Maximum Impedance (Ω) at −10°C, 100kHz	Maximum Ripple Current (mA rms) at +105°C, 100kHz
25 Volts 32 Volts Surge	3,300	SXE25VB332M16X35LL	16 × 35	0.045	0.12	2,030
	3,300	SXE25VB332M18X30LL	18 × 30	0.045	0.12	2,030
	3,900	SXE25VB392M16X40LL	16 × 40	0.037	0.096	2,320
	3,900	SXE25VB392M18X35LL	18 × 35	0.04	0.10	2,240
	4,700	SXE25VB472M18X40LL	18 × 40	0.036	0.094	2,460
35 Volts 44 Volts Surge	6.8	SXE35VB6R8M4X7LL	4 × 7	5.2	13.4	50
	12	SXE35VB12RM5X7LL	5 × 7	3.1	8.3	75
	15	SXE35VB15RM4X11LL	4 × 11.5	2.1	5.4	102
	27	SXE35VB27RM5X11LL	5 × 11.5	1.2	3.1	154
	27	SXE35VB27RM6X7LL	6.3 × 7	1.3	6.4	140
	39	SXE35VB39RM5X15LL	5 × 15	0.87	2.3	210
	56	SXE35VB56RM6X11LL	6.3 × 11.5	0.57	1.5	260
	82	SXE35VB82RM6X15LL	6.3 × 15	0.37	0.96	350
	100	SXE35VB101M8X12LL	8 × 12	0.32	0.83	400
	120	SXE35VB121M10X12LL	10 × 12.5	0.26	0.68	510
	150	SXE35VB151M8X15LL	8 × 15	0.23	0.60	500
	180	SXE35VB181M10X15LL	10 × 15	0.21	0.55	635
	220	SXE35VB221M8X20LL	8 × 20	0.18	0.47	650
	330	SXE35VB331M10X20LL	10 × 20	0.13	0.34	860
	330	SXE35VB331M12X15LL	12.5 × 15	0.11	0.29	970
	390	SXE35VB391M10X25LL	10 × 25	0.11	0.29	1,030
	470	SXE35VB471M10X30LL	10 × 30	0.089	0.23	1,150
	560	SXE35VB561M12X20LL	12.5 × 20	0.083	0.22	1,120
	560	SXE35VB561M16X15LL	16 × 15	0.096	0.25	1,100
	680	SXE35VB681M12X25LL	12.5 × 25	0.07	0.18	1,320
	820	SXE35VB821M18X15LL	18 × 15	0.076	0.20	1,280
	1,000	SXE35VB102M12X30LL	12.5 × 30	0.061	0.16	1,540
	1,000	SXE35VB102M16X20LL	16 × 20	0.071	0.18	1,370
	1,200	SXE35VB122M12X35LL	12.5 × 35	0.049	0.13	1,770
	1,200	SXE35VB122M16X25LL	16 × 25	0.062	0.16	1,570
	1,500	SXE35VB152M12X40LL	12.5 × 40	0.043	0.11	1,980
	1,500	SXE35VB152M18X20LL	18 × 20	0.059	0.15	1,580
	1,800	SXE35VB182M16X30LL	16 × 30	0.052	0.14	1,810
	1,800	SXE35VB182M18X25LL	18 × 25	0.05	0.13	1,830
	2,200	SXE35VB222M16X35LL	16 × 35	0.044	0.11	2,030
	2,200	SXE35VB222M18X30LL	18 × 30	0.044	0.11	2,030
	2,700	SXE35VB272M16X40LL	16 × 40	0.036	0.094	2,320
	2,700	SXE35VB272M18X35LL	18 × 35	0.039	0.10	2,240
	3,300	SXE35VB332M18X40LL	18 × 40	0.035	0.091	2,460
50 Volts 63 Volts Surge	4.7	SXE50VB4R7M4X7LL	4 × 7	5.0	13	50
	8.2	SXE50VB8R2M5X7LL	5 × 7	3.1	8.1	75
	10	SXE50VB10RM4X11LL	4 × 11.5	2.0	5.2	102
	18	SXE50VB18RM5X11LL	5 × 11.5	1.2	3.1	154
	18	SXE50VB18RM6X7LL	6.3 × 7	1.3	3.4	140
	27	SXE50VB27RM5X15LL	5 × 15	0.84	2.2	210
	39	SXE50VB39RM6X11LL	6.3 × 11.5	0.55	1.4	260
	56	SXE50VB56RM6X15LL	6.3 × 15	0.36	0.94	350
	68	SXE50VB68RM8X12LL	8 × 12	0.31	0.81	400
	82	SXE50VB82RM8X15LL	8 × 15	0.22	0.57	500
	82	SXE50VB82RM10X12LL	10 × 12.5	0.25	0.65	510
	100	SXE50VB101M10X15LL	10 × 15	0.20	0.52	635
	120	SXE50VB121M8X20LL	8 × 20	0.17	0.44	650
	180	SXE50VB181M10X20LL	10 × 20	0.13	0.34	860
	180	SXE50VB181M12X15LL	12.5 × 15	0.11	0.29	970
	220	SXE50VB221M10X25LL	10 × 25	0.11	0.29	1,030
	330	SXE50VB331M10X30LL	10 × 30	0.086	0.22	1,150
	330	SXE50VB331M12X20LL	12.5 × 20	0.081	0.22	1,120
	330	SXE50VB331M16X15LL	16 × 15	0.093	0.20	1,100

***The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.**

SXE Series

Standard Voltage Ratings - VB/Radial Lead

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D×L (mm)	Maximum Impedance (Ω) at +20°C, 100kHz	Maximum Impedance (Ω) at −10°C, 100kHz	Maximum Ripple Current (mA rms) at +105°C, 100kHz
50 Volts **63 Volts Surge**	470	SXE50VB471M12X25LL	12.5 × 25	0.068	0.19	1,320
	470	SXE50VB471M18X15LL	18 × 15	0.074	0.19	1,280
	560	SXE50VB561M12X30LL	12.5 × 30	0.059	0.16	1,540
	680	SXE50VB681M12X35LL	12.5 × 35	0.048	0.14	1,770
	680	SXE50VB681M16X20LL	16 × 20	0.069	0.15	1,370
	820	SXE50VB821M12X40LL	12.5 × 40	0.042	0.12	1,980
	820	SXE50VB821M16X25LL	16 × 25	0.06	0.13	1,570
	820	SXE50VB821M18X20LL	18 × 20	0.057	0.15	1,580
	1,000	SXE50VB102M16X30LL	16 × 30	0.05	0.13	1,810
	1,000	SXE50VB102M18X25LL	18 × 25	0.049	0.13	1,830
	1,200	SXE50VB122M16X35LL	16 × 35	0.043	0.11	2,030
	1,500	SXE50VB152M16X40LL	16 × 40	0.035	0.091	2,320
	1,500	SXE50VB152M18X30LL	18 × 30	0.043	0.11	2,030
	1,800	SXE50VB182M18X35LL	18 × 35	0.038	0.099	2,240
	2,200	SXE50VB222M18X40LL	18 × 40	0.034	0.088	2,460
63 Volts **79 Volts Surge**	3.3	SXE63VB3R3M4X7LL	4 × 7	11.2	30.2	38
	5.6	SXE63VB5R6M5X7LL	5 × 7	5.1	13.8	61
	6.8	SXE63VB6R8M4X11LL	4 × 11.5	4.3	11.6	73
	12	SXE63VB12RM5X11LL	5 × 11.5	2.0	5.4	124
	12	SXE63VB12RM6X7LL	6.3 × 7	3.0	8.1	95
	18	SXE63VB18RM5X15LL	5 × 15	1.4	3.8	170
	27	SXE63VB27RM6X11LL	6.3 × 11.5	1.2	3.2	180
	39	SXE63VB39RM6X15LL	6.3 × 15	0.66	1.8	270
	47	SXE63VB47RM8X12LL	8 × 12	0.56	1.5	305
	56	SXE63VB56RM10X12LL	10 × 12.5	0.50	0.14	380
	68	SXE63VB68RM8X15LL	8 × 15	0.36	0.97	410
	68	SXE63VB68RM10X15LL	10 × 15	0.35	0.95	500
	82	SXE63VB82RM8X20LL	8 × 20	0.22	0.57	605
	120	SXE63VB121M10X20LL	10 × 20	0.27	0.74	620
	150	SXE63VB151M10X25LL	10 × 25	0.20	0.53	795
	150	SXE63VB151M12X15LL	12.5 × 15	0.25	0.67	640
	180	SXE63VB181M10X30LL	10 × 30	0.16	0.42	955
	220	SXE63VB221M12X20LL	12.5 × 20	0.16	0.42	890
	220	SXE63VB221M16X15LL	16 × 15	0.15	0.41	960
	270	SXE63VB271M12X25LL	12.5 × 25	0.14	0.38	1,040
	330	SXE63VB331M18X15LL	18 × 15	0.13	0.35	1,130
	390	SXE63VB391M12X30LL	12.5 × 30	0.11	0.29	1,270
	390	SXE63VB391M16X20LL	16 × 20	0.12	0.32	1,240
	470	SXE63VB471M12X35LL	12.5 × 35	0.091	0.25	1,450
	470	SXE63VB471M16X25LL	16 × 25	0.091	0.25	1,440
	560	SXE63VB561M12X40LL	12.5 × 40	0.08	0.22	1,610
	560	SXE63VB561M18X20LL	18 × 20	0.091	0.25	1,450
	680	SXE63VB681M16X30LL	16 × 30	0.065	0.18	1,790
	680	SXE63VB681M18X25LL	18 × 25	0.078	0.21	1,650
	820	SXE63VB821M16X35LL	16 × 35	0.056	0.15	2,000
	820	SXE63VB821M18X30LL	18 × 30	0.065	0.18	1,850
	1,000	SXE63VB102M16X40LL	16 × 40	0.049	0.13	2,220
	1,000	SXE63VB102M18X35LL	18 × 35	0.061	0.16	1,990
	1,200	SXE63VB122M18X40LL	18 × 40	0.046	0.12	2,370
80 Volts **100 Volts Surge**	2.2	SXE80VB2R2M4X7LL	4 × 7	11	29.7	38
	3.9	SXE80VB3R9M5X7LL	5 × 7	5.0	13.5	61
	4.7	SXE80VB4R7M4X11LL	4 × 11.5	4.2	11.3	73
	8.2	SXE80VB8R2M5X11LL	5 × 11.5	1.9	5.2	124
	8.2	SXE80VB8R2M6X7LL	6.3 × 7	2.9	7.8	95
	12	SXE80VB12RM5X15LL	5 × 15	1.4	3.7	170
	18	SXE80VB18RM6X11LL	6.3 × 11.5	1.1	3.0	180
	27	SXE80VB27RM6X15LL	6.3 × 15	0.64	1.7	270
	33	SXE80VB33RM8X12LL	8 × 12	0.54	1.5	305

***The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.**

SXE Series

Standard Voltage Ratings - VB/Radial Lead

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D×L (mm)	Maximum Impedance (Ω) at +20°C, 100kHz	Maximum Impedance (Ω) at −10°C, 100kHz	Maximum Ripple Current (mA rms) at +105°C, 100kHz
80 Volts 100 Volts Surge	39	SXE80VB39RM10X12LL	10 × 12.5	0.49	1.3	380
	47	SXE80VB47RM8X15LL	8 × 15	0.36	0.97	410
	56	SXE80VB56RM8X20LL	8 × 20	0.28	0.74	605
	56	SXE80VB56RM10X15LL	10 × 15	0.34	0.90	500
	82	SXE80VB82RM10X20LL	10 × 20	0.26	0.71	620
	100	SXE80VB101M10X25LL	10 × 25	0.19	0.51	795
	100	SXE80VB101M12X15LL	12.5 × 15	0.24	0.64	640
	150	SXE80VB151M10X30LL	10 × 30	0.15	0.41	955
	150	SXE80VB151M12X20LL	12.5 × 20	0.15	0.41	890
	180	SXE80VB181M12X25LL	12.5 × 25	0.14	0.37	1,040
	180	SXE80VB181M16X15LL	16 × 15	0.14	0.38	960
	220	SXE80VB221M18X15LL	18 × 15	0.13	0.34	1,130
	270	SXE80VB271M12X30LL	12.5 × 30	0.10	0.28	1,270
	270	SXE80VB271M16X20LL	16 × 20	0.11	0.31	1,240
	330	SXE80VB331M12X35LL	12.5 × 35	0.088	0.24	1,450
	330	SXE80VB331M16X25LL	16 × 25	0.088	0.24	1,440
	390	SXE80VB391M12X40LL	12.5 × 40	0.076	0.21	1,610
	390	SXE80VB391M18X20LL	18 × 20	0.088	0.24	1,450
	470	SXE80VB471M16X30LL	16 × 30	0.063	0.17	1,790
	470	SXE80VB471M18X25LL	18 × 25	0.075	0.20	1,650
	560	SXE80VB561M16X35LL	16 × 35	0.054	0.15	2,000
	680	SXE80VB681M16X40LL	16 × 40	0.048	0.13	2,220
	680	SXE80VB681M18X30LL	18 × 30	0.063	0.17	1,850
	820	SXE80VB821M18X35LL	18 × 35	0.06	0.16	1,990
	1,000	SXE80VB102M18X40LL	18 × 40	0.044	0.12	2,370

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D×L (mm)	Maximum Impedance (Ω) at +20°C, 100kHz	Maximum Impedance (Ω) at −10°C, 100kHz	Maximum Ripple Current (mA rms) at +105°C, 100kHz
100 Volts 125 Volts Surge	1.5	SXE100VB1R5M4X7LL	4 × 7	10.8	29.2	38
	2.7	SXE100VB2R7M5X7LL	5 × 7	4.9	13.2	61
	3.3	SXE100VB3R3M4X11LL	4 × 11.5	4.1	11.1	73
	5.6	SXE100VB5R6M5X11LL	5 × 11.5	1.9	5.1	124
	5.6	SXE100VB5R6M6X7LL	6.3 × 7	2.8	7.6	95
	8.2	SXE100VB8R2M5X15LL	5 × 15	1.3	3.6	170
	12	SXE100VB12RM6X11LL	6.3 × 11.5	1.1	3.0	180
	18	SXE100VB18RM6X15LL	6.3 × 15	0.62	1.7	270
	22	SXE100VB22RM8X12LL	8 × 12	0.53	1.4	305
	27	SXE100VB27RM10X12LL	10 × 12.5	0.48	1.3	380
	33	SXE100VB33RM8X15LL	8 × 15	0.35	0.95	410
	33	SXE100VB33RM10X15LL	10 × 15	0.33	0.89	500
	39	SXE100VB39RM8X20LL	8 × 20	0.27	0.73	605
	56	SXE100VB56RM10X20LL	10 × 20	0.26	0.70	620
	68	SXE100VB68RM10X25LL	10 × 25	0.19	0.50	795
	68	SXE100VB68RM12X15LL	12.5 × 15	0.23	0.63	640
	100	SXE100VB101M10X30LL	10 × 30	0.15	0.40	955
	100	SXE100VB101M12X20LL	12.5 × 20	0.15	0.40	890
	120	SXE100VB121M12X25LL	12.5 × 25	0.13	0.36	1,040
	120	SXE100VB121M16X15LL	16 × 15	0.14	0.38	960
	150	SXE100VB151M18X15LL	18 × 15	0.12	0.33	1,130
	180	SXE100VB181M12X30LL	12.5 × 30	0.10	0.27	1,270
	180	SXE100VB181M16X20LL	16 × 20	0.11	0.30	1,240
	220	SXE100VB221M12X35LL	12.5 × 35	0.087	0.23	1,450
	220	SXE100VB221M16X25LL	16 × 25	0.086	0.23	1,440
	270	SXE100VB271M12X40LL	12.5 × 40	0.074	0.20	1,610
	270	SXE100VB271M18X20LL	18 × 20	0.086	0.23	1,450
	330	SXE100VB331M16X30LL	16 × 30	0.062	0.17	1,790
	330	SXE100VB331M18X25LL	18 × 25	0.074	0.20	1,650
	390	SXE100VB391M16X35LL	16 × 35	0.053	0.14	2,000
	390	SXE100VB391M18X30LL	18 × 30	0.062	0.17	1,850
	470	SXE100VB471M16X40LL	16 × 40	0.047	0.13	2,220
	560	SXE100VB561M18X35LL	18 × 35	0.059	0.16	1,990
	680	SXE100VB681M18X40LL	18 × 40	0.043	0.12	2,370

***The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.**