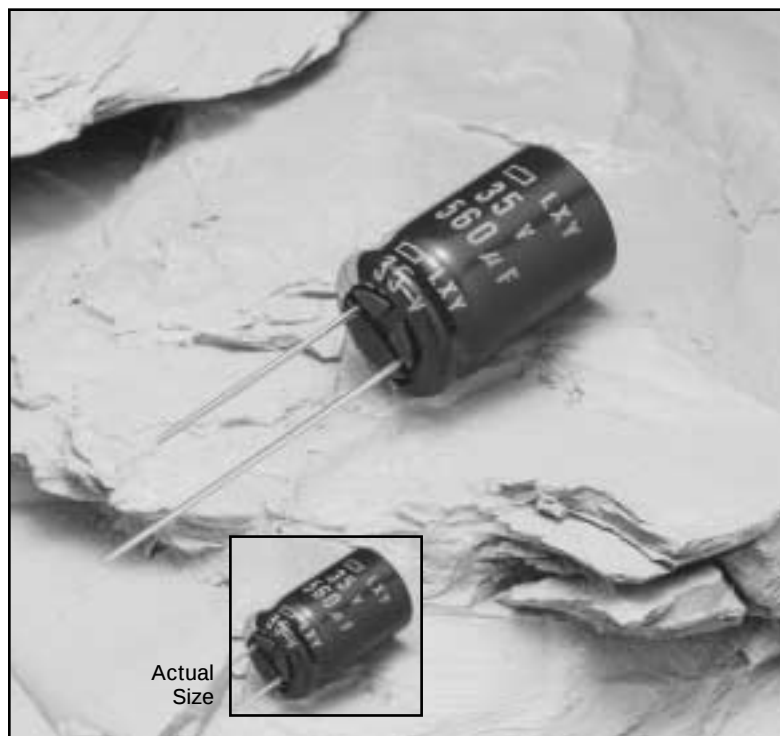


- **Miniature**
- **Low Impedance**
- **Large Capacitance**
- **Solvent Proof**
- **+105°C Maximum Temperature**



The new LXY series capacitors have a low impedance and are designed for use in situations at high frequencies. The LXY capacitors are ideal for use in switching power supplies, as their characteristics include a wide temperature range, long life, and low impedance.

The LXY series capacitors are solvent proof. Refer to the Mini-Glossary for cleaning guidelines and recommended cleaning agents that are compatible with United Chemi-Con products.

Summary of Specifications

- **Radial lead terminals.**
- **Capacitance range: 10 to 8,200 μ F.**
- **Voltage range: 10 to 63VDC.**
- **Operating temperature range: -55°C to +105°C.**
- **Leakage current: 0.01CV or 3 μ A, whichever is greater, after 2 minutes at +20°C.**
- **Standard capacitance tolerance: $\pm 20\%$**
- **Nominal case size (D $\times$ L): 5 $\times$ 11.5mm to 16 $\times$ 40mm.**
- **Rated lifetime: 2,000 to 8,000 hours at +105°C with the rated ripple current applied, depending on case size.**

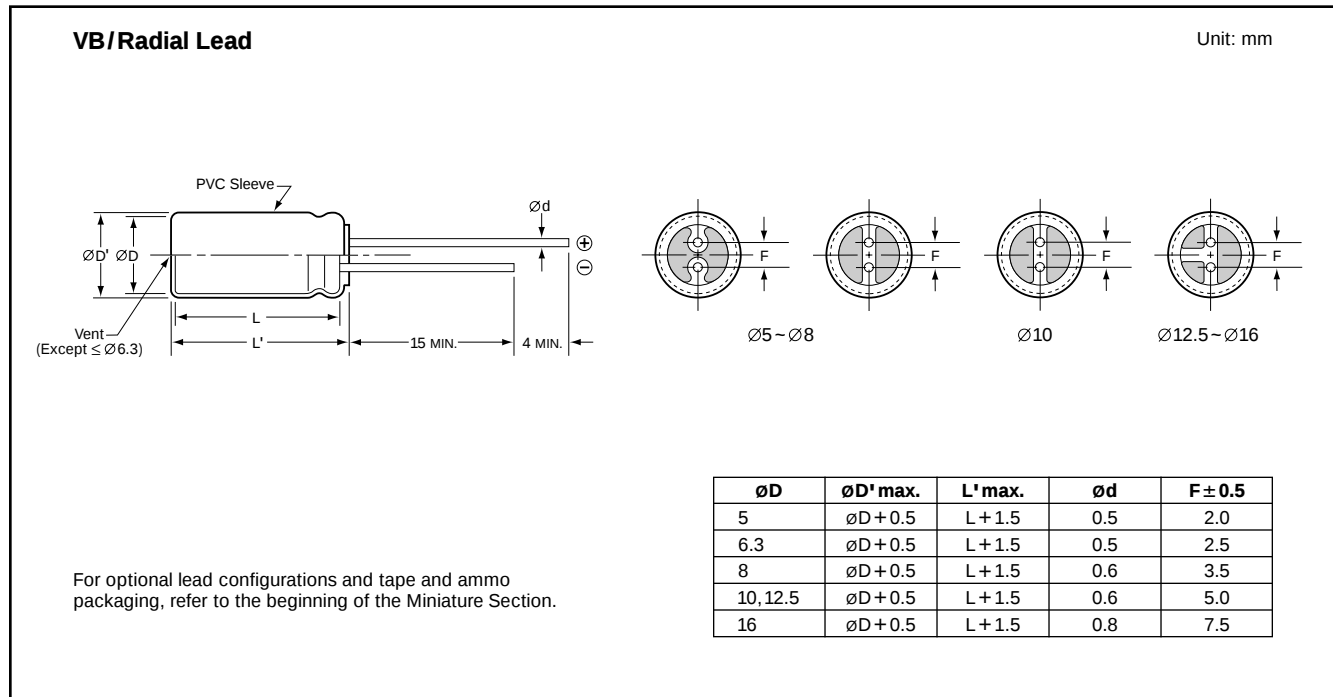
LXY Series

LXY Specifications

Item	Characteristics																																				
Category Temperature Range	− 55 to +105°C																																				
Rated Voltage Range	10 to 63VDC																																				
Capacitance Range	10 to 8,200μF																																				
Capacitance Tolerance	± 20% (M) at +20°C, 120Hz																																				
Leakage Current	I = 0.01CV or 3μA, whichever is greater, after 2 minutes at +20°C. Where I = Max. leakage current (μA), C = Nominal capacitance (μF) and V = Rated voltage (V)																																				
Dissipation Factor (Tan δ)	At +20°C, 120Hz <table><tr><td>Rated Voltage (V)</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td></tr><tr><td>Tan δ (DF)</td><td>0.19</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.10</td></tr></table> When nominal capacitance exceeds 1,000μF, add 0.02 to the values above for each 1,000μF increase.	Rated Voltage (V)	10	16	25	35	50	63	Tan δ (DF)	0.19	0.16	0.14	0.12	0.10	0.10																						
Rated Voltage (V)	10	16	25	35	50	63																															
Tan δ (DF)	0.19	0.16	0.14	0.12	0.10	0.10																															
Impedance at 100kHz	At 100kHz, maximum impedance at +20°C and −10°C is specified in the Ratings Tables.																																				
Low Temperature Characteristics	At 120Hz, impedance (Z) ratio between the − 55°C value and +20°C value shall not exceed the values given below. <table><tr><td>Rated Voltage (V)</td><td>10 - 50</td><td>63</td></tr><tr><td>Z (−55°C) / Z (+20°C)</td><td>3</td><td>6</td></tr></table>	Rated Voltage (V)	10 - 50	63	Z (−55°C) / Z (+20°C)	3	6																														
Rated Voltage (V)	10 - 50	63																																			
Z (−55°C) / Z (+20°C)	3	6																																			
Rated Ripple Current Multipliers <i>Refer to Section 4 of the Mini-Glossary for explanation of Rated Ripple Current Multipliers.</i>	Ambient Temperature (°C) <table><tr><td>≤ +65°C</td><td>+85°C</td><td>+105°C</td></tr><tr><td>2.23</td><td>1.73</td><td>1.00</td></tr></table> Frequency (Hz) <table><tr><td>Capacitance (μF)</td><td>120Hz</td><td>1kHz</td><td>10kHz</td><td>100kHz</td></tr><tr><td>10 - 180μF</td><td>0.40</td><td>0.75</td><td>0.90</td><td>1.00</td></tr><tr><td>220 - 560μF</td><td>0.50</td><td>0.85</td><td>0.94</td><td>1.00</td></tr><tr><td>680 - 1,800μF</td><td>0.60</td><td>0.87</td><td>0.95</td><td>1.00</td></tr><tr><td>2,200 - 3,900μF</td><td>0.75</td><td>0.90</td><td>0.95</td><td>1.00</td></tr><tr><td>4,700 - 8,200μF</td><td>0.85</td><td>0.95</td><td>0.98</td><td>1.00</td></tr></table>	≤ +65°C	+85°C	+105°C	2.23	1.73	1.00	Capacitance (μF)	120Hz	1kHz	10kHz	100kHz	10 - 180μF	0.40	0.75	0.90	1.00	220 - 560μF	0.50	0.85	0.94	1.00	680 - 1,800μF	0.60	0.87	0.95	1.00	2,200 - 3,900μF	0.75	0.90	0.95	1.00	4,700 - 8,200μF	0.85	0.95	0.98	1.00
≤ +65°C	+85°C	+105°C																																			
2.23	1.73	1.00																																			
Capacitance (μF)	120Hz	1kHz	10kHz	100kHz																																	
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2,200 - 3,900μF	0.75	0.90	0.95	1.00																																	
4,700 - 8,200μF	0.85	0.95	0.98	1.00																																	
Endurance (Load Life)	The following specifications shall be satisfied when the capacitors are restored to +20°C after subjecting them to DC voltage for the specified test time at +105°C with the rated ripple current applied. The sum of the DC voltage and peak AC voltage must not exceed the full rated voltage of the capacitors. <table><tr><td>Case Diameter</td><td>Ø5 & Ø6.3mm</td><td>Ø8mm</td><td>Ø10mm</td><td>Ø12.5mm</td><td>Ø16 & Ø18mm</td></tr><tr><td>Test Time</td><td>2,000 Hours</td><td>3,000 Hours</td><td>5,000 Hours</td><td>7,000 Hours</td><td>8,000 Hours</td></tr></table> Capacitance change: ≤ ± 20% of initial measured value Tan δ (DF) : ≤ 200% of initial specified value Leakage current : ≤ initial specified value	Case Diameter	Ø5 & Ø6.3mm	Ø8mm	Ø10mm	Ø12.5mm	Ø16 & Ø18mm	Test Time	2,000 Hours	3,000 Hours	5,000 Hours	7,000 Hours	8,000 Hours																								
Case Diameter	Ø5 & Ø6.3mm	Ø8mm	Ø10mm	Ø12.5mm	Ø16 & Ø18mm																																
Test Time	2,000 Hours	3,000 Hours	5,000 Hours	7,000 Hours	8,000 Hours																																
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. 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																																				
Others	Satisfies characteristic W of JIS C5141																																				

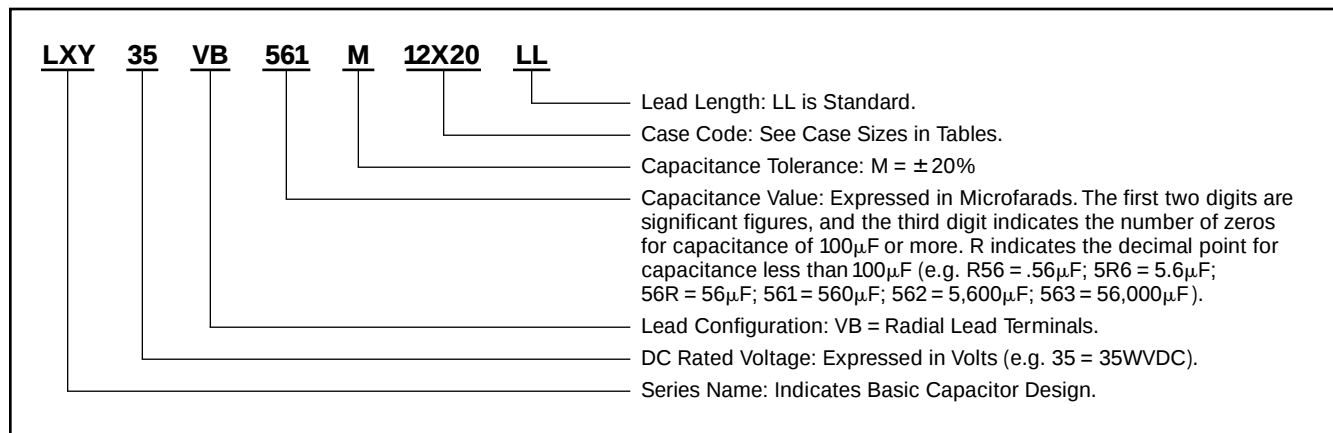
LXY Series

Diagram of Dimensions



Part Numbering System for LXY Series

When ordering, always specify complete catalog number for LXY 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		Rated Ripple Current (mA rms) at +105°C, 100kHz
				+20°C, 100kHz	−10°C, 100kHz	
10 Volts 13 Volts Surge	82	LXY10VB82RM5X11LL	5 × 11.5	0.75	1.5	163
	180	LXY10VB181M6X11LL	6.3 × 11.5	0.35	0.7	273
	220	LXY10VB221M6X15LL	6.3 × 15	0.25	0.5	390
	330	LXY10VB331M8X12LL	8 × 12	0.17	0.34	445
	390	LXY10VB391M10X12LL	10 × 12.5	0.12	0.24	625
	470	LXY10VB471M8X15LL	8 × 15	0.13	0.26	555
	680	LXY10VB681M8X20LL	8 × 20	0.095	0.19	740
	680	LXY10VB681M10X16LL	10 × 16	0.084	0.17	825
	1,000	LXY10VB102M10X20LL	10 × 20	0.062	0.13	1,040
	1,200	LXY10VB122M10X25LL	10 × 25	0.052	0.11	1,260
	1,500	LXY10VB152M10X30LL	10 × 30	0.044	0.088	1,440
	1,800	LXY10VB182M12X20LL	12.5 × 20	0.046	0.092	1,340

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

LXY 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		Rated Ripple Current (mA rms) at +105°C, 100kHz
				+20°C, 100kHz	−10°C, 100kHz	
10 Volts 13 Volts Surge	2,200	LXY10VB222M12X25LL	12.5 × 25	0.034	0.068	1,690
	2,700	LXY10VB272M12X30LL	12.5 × 30	0.03	0.06	1,950
	3,300	LXY10VB332M12X35LL	12.5 × 35	0.024	0.048	2,200
	3,300	LXY10VB332M16X20LL	16 × 20	0.038	0.076	1,630
	3,900	LXY10VB392M12X40LL	12.5 × 40	0.022	0.044	2,390
	3,900	LXY10VB392M16X25LL	16 × 25	0.028	0.056	2,070
	5,600	LXY10VB562M16X30LL	16 × 30	0.025	0.05	2,350
	6,800	LXY10VB682M16X35LL	16 × 35	0.022	0.044	2,550
16 Volts 20 Volts Surge	8,200	LXY10VB822M16X40LL	16 × 40	0.018	0.036	2,900
	56	LXY16VB56RM5X11LL	5 × 11.5	0.75	1.5	163
	120	LXY16VB121M6X11LL	6.3 × 11.5	0.35	0.7	273
	180	LXY16VB181M6X15LL	6.3 × 15	0.25	0.5	390
	270	LXY16VB271M8X12LL	8 × 12	0.17	0.34	445
	270	LXY16VB271M10X12LL	10 × 12.5	0.12	0.24	625
	330	LXY16VB331M8X15LL	8 × 15	0.13	0.26	555
	470	LXY16VB471M8X20LL	8 × 20	0.095	0.19	740
	470	LXY16VB471M10X16LL	10 × 16	0.084	0.17	825
	680	LXY16VB681M10X20LL	10 × 20	0.062	0.13	1,040
	820	LXY16VB821M10X25LL	10 × 25	0.052	0.11	1,260
	1,200	LXY16VB122M10X30LL	10 × 30	0.044	0.088	1,440
	1,200	LXY16VB122M12X20LL	12.5 × 20	0.046	0.092	1,340
	1,500	LXY16VB152M12X25LL	12.5 × 25	0.034	0.068	1,690
	2,200	LXY16VB222M12X30LL	12.5 × 30	0.03	0.06	1,950
	2,200	LXY16VB222M16X20LL	16 × 20	0.038	0.076	1,630
	2,700	LXY16VB272M12X35LL	12.5 × 35	0.024	0.048	2,200
	2,700	LXY16VB272M16X25LL	16 × 25	0.028	0.056	2,070
	3,300	LXY16VB332M12X40LL	12.5 × 40	0.022	0.044	2,390
	3,900	LXY16VB392M16X30LL	16 × 30	0.025	0.05	2,350
25 Volts 32 Volts Surge	4,700	LXY16VB472M16X35LL	16 × 35	0.022	0.044	2,550
	5,600	LXY16VB562M16X40LL	16 × 40	0.018	0.036	2,900
	39	LXY25VB39RM5X11LL	5 × 11.5	0.75	1.5	163
	82	LXY25VB82RM6X11LL	6.3 × 11.5	0.35	0.7	273
	120	LXY25VB121M6X15LL	6.3 × 15	0.25	0.5	390
	150	LXY25VB151M8X12LL	8 × 12	0.17	0.34	445
	180	LXY25VB181M10X12LL	10 × 12.5	0.12	0.24	625
	220	LXY25VB221M8X15LL	8 × 15	0.13	0.26	555
	330	LXY25VB331M8X20LL	8 × 20	0.095	0.19	740
	330	LXY25VB331M10X16LL	10 × 16	0.084	0.17	825
	470	LXY25VB471M10X20LL	10 × 20	0.062	0.13	1,040
	560	LXY25VB561M10X25LL	10 × 25	0.052	0.11	1,260
	820	LXY25VB821M10X30LL	10 × 30	0.044	0.088	1,440
	820	LXY25VB821M12X20LL	12.5 × 20	0.046	0.092	1,340
	1,000	LXY25VB102M12X25LL	12.5 × 25	0.034	0.068	1,690
	1,500	LXY25VB152M12X30LL	12.5 × 30	0.03	0.06	1,950
	1,500	LXY25VB152M16X20LL	16 × 20	0.038	0.076	1,630
	1,800	LXY25VB182M12X35LL	12.5 × 35	0.024	0.048	2,200
35 Volts 44 Volts Surge	1,800	LXY25VB182M16X25LL	16 × 25	0.028	0.056	2,070
	2,200	LXY25VB222M12X40LL	12.5 × 40	0.022	0.044	2,390
	2,700	LXY25VB272M16X30LL	16 × 30	0.025	0.05	2,350
	3,300	LXY25VB332M16X35LL	16 × 35	0.022	0.044	2,550
	3,900	LXY25VB392M16X40LL	16 × 40	0.018	0.036	2,900
	27	LXY35VB27RM5X11LL	5 × 11.5	0.75	1.5	163
	56	LXY35VB56RM6X11LL	6.3 × 11.5	0.35	0.7	273
	82	LXY35VB82RM6X15LL	6.3 × 15	0.25	0.5	390
	120	LXY35VB121M8X12LL	8 × 12	0.17	0.34	445
	120	LXY35VB121M10X12LL	10 × 12.5	0.12	0.24	625
	180	LXY35VB181M8X15LL	8 × 15	0.13	0.26	555

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

LXY 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		Rated Ripple Current (mA rms) at +105°C, 100kHz
				+20°C, 100kHz	−10°C, 100kHz	

35 Volts 44 Volts Surge	220	LXY35VB221M8X20LL	8 × 20	0.095	0.19	740
	220	LXY35VB221M10X16LL	10 × 16	0.084	0.17	825
	330	LXY35VB331M10X20LL	10 × 20	0.062	0.13	1,040
	390	LXY35VB391M10X25LL	10 × 25	0.052	0.11	1,260
	560	LXY35VB561M10X30LL	10 × 30	0.044	0.088	1,440
	560	LXY35VB561M12X20LL	12.5 × 20	0.046	0.092	1,340
	680	LXY35VB681M12X25LL	12.5 × 25	0.034	0.068	1,690
	1,000	LXY35VB102M12X30LL	12.5 × 30	0.030	0.060	1,950
	1,000	LXY35VB102M16X20LL	16 × 20	0.038	0.076	1,630
	1,200	LXY35VB122M12X35LL	12.5 × 35	0.024	0.048	2,200
	1,200	LXY35VB122M16X25LL	16 × 25	0.028	0.056	2,070
	1,500	LXY35VB152M12X40LL	12.5 × 40	0.022	0.044	2,390
	1,800	LXY35VB182M16X30LL	16 × 30	0.025	0.05	2,350
	2,200	LXY35VB222M16X35LL	16 × 35	0.022	0.044	2,550
	2,700	LXY35VB272M16X40LL	16 × 40	0.018	0.036	2,900

50 Volts 63 Volts Surge	18	LXY50VB18RM5X11LL	5 × 11.5	1.2	2.4	129
	39	LXY50VB39RM6X11LL	6.3 × 11.5	0.54	1.1	219
	56	LXY50VB56RM6X15LL	6.3 × 15	0.34	0.68	310
	68	LXY50VB68RM8X12LL	8 × 12	0.3	0.6	340
	82	LXY50VB82RM8X15LL	8 × 15	0.2	0.4	470
	82	LXY50VB82RM10X12LL	10 × 12.5	0.2	0.4	480
	120	LXY50VB121M8X20LL	8 × 20	0.14	0.28	610
	120	LXY50VB121M10X16LL	10 × 16	0.13	0.26	755
	180	LXY50VB181M10X20LL	10 × 20	0.088	0.18	945
	220	LXY50VB221M10X25LL	10 × 25	0.073	0.15	1,150
	330	LXY50VB331M10X30LL	10 × 30	0.054	0.11	1,260
	330	LXY50VB331M12X20LL	12.5 × 20	0.059	0.12	1,190
	470	LXY50VB471M12X25LL	12.5 × 25	0.044	0.088	1,490
	560	LXY50VB561M12X30LL	12.5 × 30	0.039	0.078	1,720
	680	LXY50VB681M12X35LL	12.5 × 35	0.033	0.066	1,890
	680	LXY50VB681M16X20LL	16 × 20	0.05	0.10	1,420
	820	LXY50VB821M12X40LL	12.5 × 40	0.029	0.058	2,030
	820	LXY50VB821M16X25LL	16 × 25	0.034	0.068	1,880
	1,000	LXY50VB102M16X30LL	16 × 30	0.03	0.06	2,150
	1,200	LXY50VB122M16X35LL	16 × 35	0.027	0.054	2,320
	1,500	LXY50VB152M16X40LL	16 × 40	0.024	0.048	2,540

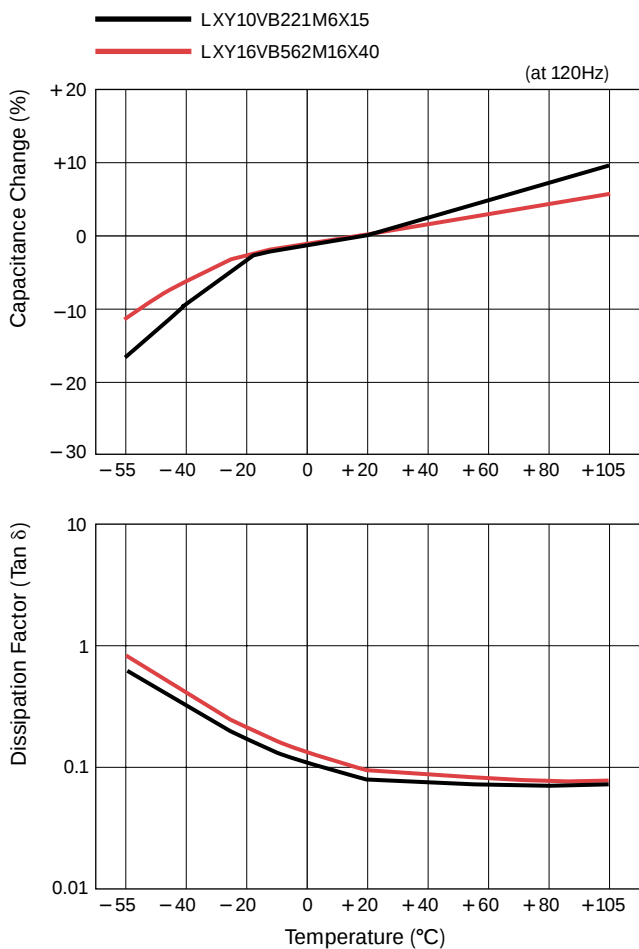
63 Volts 79 Volts Surge	10	LXY63VB10RM5X11LL	5 × 11.5	1.9	4.8	103
	18	LXY63VB18RM6X11LL	6.3 × 11.5	1.0	2.5	161
	33	LXY63VB33RM6X15LL	6.3 × 15	0.61	1.6	233
	47	LXY63VB47RM8X12LL	8 × 12	0.47	1.2	274
	56	LXY63VB56RM10X12LL	10 × 12.5	0.27	0.68	418
	68	LXY63VB68RM8X15LL	8 × 15	0.34	0.85	360
	68	LXY63VB68RM10X16LL	10 × 16	0.21	0.53	523
	82	LXY63VB82RM8X20LL	8 × 20	0.21	0.53	500
	120	LXY63VB121M10X20LL	10 × 20	0.16	0.40	650
	150	LXY63VB151M10X25LL	10 × 25	0.13	0.33	783
	180	LXY63VB181M10X30LL	10 × 30	0.10	0.25	957
	220	LXY63VB221M12X20LL	12.5 × 20	0.11	0.28	869
	270	LXY63VB271M12X25LL	12.5 × 25	0.074	0.19	1,150
	330	LXY63VB331M16X20LL	16 × 20	0.085	0.22	1,100
	390	LXY63VB391M12X30LL	12.5 × 30	0.068	0.17	1,280
	470	LXY63VB471M12X35LL	12.5 × 35	0.063	0.16	1,390
	470	LXY63VB471M16X25LL	16 × 25	0.055	0.14	1,480
	560	LXY63VB561M12X40LL	12.5 × 40	0.051	0.13	1,530
	680	LXY63VB681M16X30LL	16 × 30	0.046	0.12	1,720
	820	LXY63VB821M16X35LL	16 × 35	0.04	0.10	1,910
	1,000	LXY63VB102M16X40LL	16 × 40	0.036	0.09	2,070

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

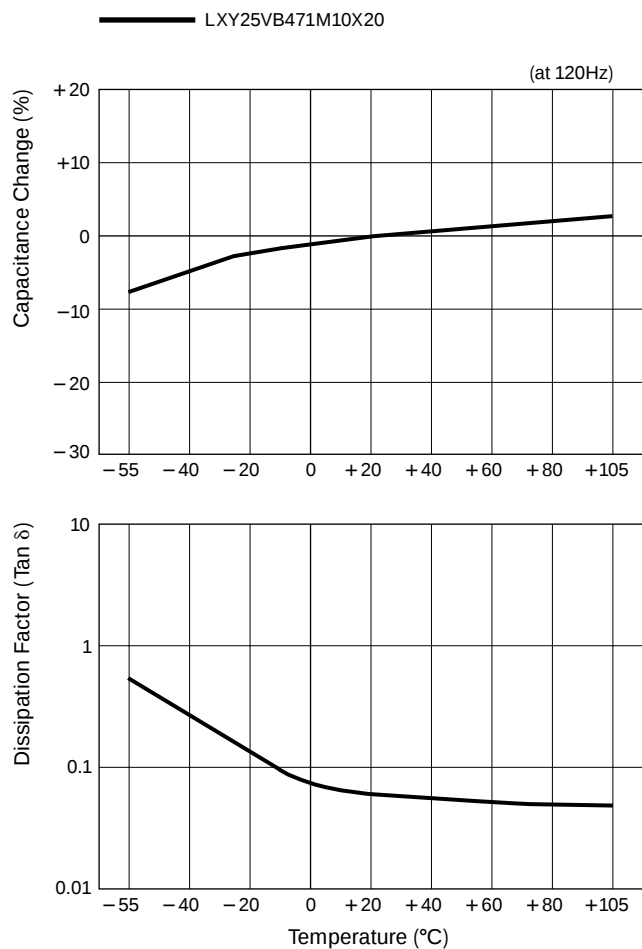
LXY
MINIATURE - 105°C

LXY Series

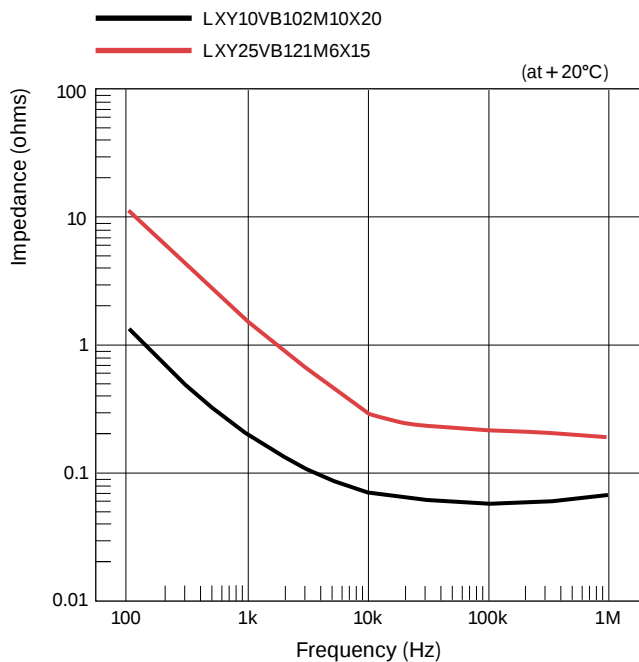
Temperature Characteristics



Temperature Characteristics



Impedance - Frequency Characteristics



Impedance - Frequency Characteristics

