

# LRB Series

- Higher ripple current on high frequency band
- Endurance with ripple current : 5,000 hours at 105°C.
- Rated voltage range : 400 to 450V, Capacitance range : 85 to 330μF
- Ideal for high frequency drive power conversion system applications such as solar power conditioners
- Non solvent resistant type
- RoHS2 Compliant

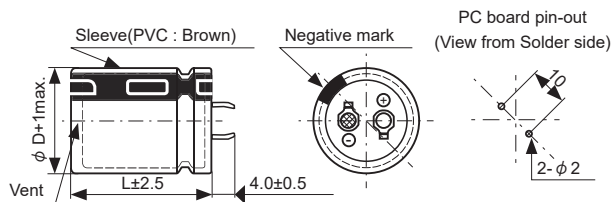
## ◆ SPECIFICATION

Items	Characteristics		
Category	-40 to +105°C		
Temperature Range	-40 to +105°C		
Rated Voltage Range	400 to 450V <sub>dc</sub>		
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)		
Leakage Current	$I \leq 3\sqrt{CV}$ Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 5 minutes)		
Dissipation Factor (tan δ)	Rated voltage (V <sub>dc</sub> )	400V	420 & 450V
	tanδ (Max.)	0.15	0.20
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	400V	420 & 450V
	Z(-25°C)/Z(+20°C)	3	8
	Z(-40°C)/Z(+20°C)	12	14
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 5,000 hours at 105°C .		
	Capacitance change	≤ ±20% of the initial value	
	D.F. (tan δ)	≤ 200% of the initial specified value	
	Leakage current	≤ 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. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.		
	Capacitance change	≤ ±15% of the initial value	
	D.F. (tan δ)	≤ 150% of the initial specified value	
	Leakage current	≤ The initial specified value	

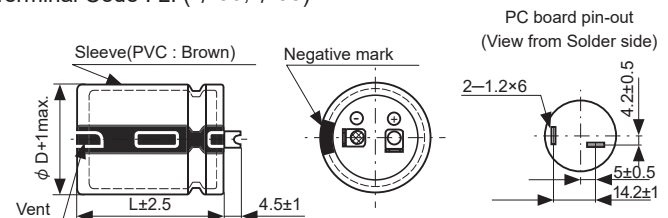
## ◆ DIMENSIONS[mm]

- Terminal Code : VS ( φ 30, φ 35 ) : Standard

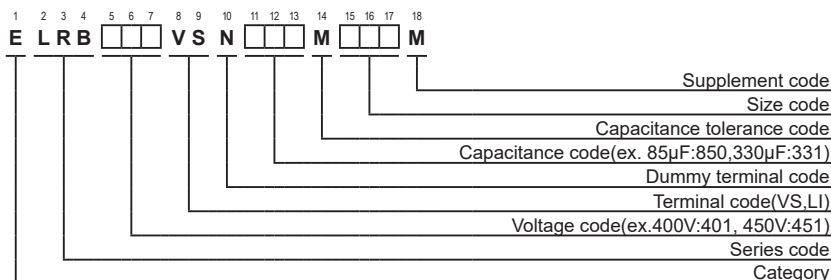
- Terminal Code : LI ( φ 30, φ 35 )



The standard design has no plastic disc.



## ◆ PART NUMBERING SYSTEM



**LRB Series**

◆ **STANDARD RATINGS**

WV (V <sub>dc</sub> )	Cap (μF)	Case size φ D×L(mm)	tan δ	Rated ripple current (Arms/105°C, 100kHz)	Part No.	WV (V <sub>dc</sub> )	Cap (μF)	Case size φ D×L(mm)	tan δ	Rated ripple current (Arms/105°C, 100kHz)	Part No.
400	120	30×35	0.15	5.54	ELRB401VSN121MR35M	450	85	30×35	0.20	4.58	ELRB451VSN850MR35M
	150	30×41	0.15	5.69	ELRB401VSN151MR41M		110	30×41	0.20	4.91	ELRB451VSN111MR41M
	170	30×46	0.15	5.83	ELRB401VSN171MR46M		120	30×46	0.20	5.15	ELRB451VSN121MR46M
	170	35×35	0.15	5.87	ELRB401VSN171MA35M		120	35×35	0.20	5.23	ELRB451VSN121MA35M
	190	30×51	0.15	5.97	ELRB401VSN191MR51M		140	30×51	0.20	5.39	ELRB451VSN141MR51M
	210	30×54	0.15	6.06	ELRB401VSN211MR54M		150	30×54	0.20	5.54	ELRB451VSN151MR54M
	210	35×41	0.15	6.10	ELRB401VSN211MA41M		150	35×41	0.20	5.63	ELRB451VSN151MA41M
	230	30×59	0.15	6.20	ELRB401VSN231MR59M		170	30×59	0.20	5.78	ELRB451VSN171MR59M
	230	35×46	0.15	6.30	ELRB401VSN231MA46M		170	35×46	0.20	5.95	ELRB451VSN171MA46M
	270	35×51	0.15	6.45	ELRB401VSN271MA51M		200	35×51	0.20	6.28	ELRB451VSN201MA51M
	290	35×54	0.15	6.60	ELRB401VSN291MA54M		210	35×54	0.20	6.47	ELRB451VSN211MA54M
	330	35×59	0.15	6.85	ELRB401VSN331MA59M		240	35×59	0.20	6.72	ELRB451VSN241MA59M
	420	100	30×35	0.20	4.58		ELRB421VSN101MR35M				
120		30×41	0.20	4.91	ELRB421VSN121MR41M						
140		30×46	0.20	5.15	ELRB421VSN141MR46M						
140		35×35	0.20	5.23	ELRB421VSN141MA35M						
160		30×51	0.20	5.39	ELRB421VSN161MR51M						
170		30×54	0.20	5.54	ELRB421VSN171MR54M						
170		35×41	0.20	5.63	ELRB421VSN171MA41M						
190		30×59	0.20	5.78	ELRB421VSN191MR59M						
200		35×46	0.20	5.95	ELRB421VSN201MA46M						
230		35×51	0.20	6.28	ELRB421VSN231MA51M						
250		35×54	0.20	6.47	ELRB421VSN251MA54M						
280		35×59	0.20	6.72	ELRB421VSN281MA59M						

◆ **RATED RIPPLE CURRENT MULTIPLIERS**

● Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k	100k
400 to 450V <sub>dc</sub>	0.22	0.33	0.49	0.73	1.00	1.00	1.00