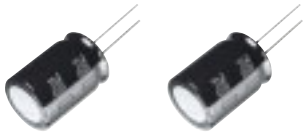
Radial Lead Type

Series: **ED** Type: **A**

✻Propose EE series for New design



■ Features

- High ripple current (at high frequency)
- Endurance : 105 °C 8000 h to 10000 h
- Including low profile products (20 mm height)
- RoHS directive compliant

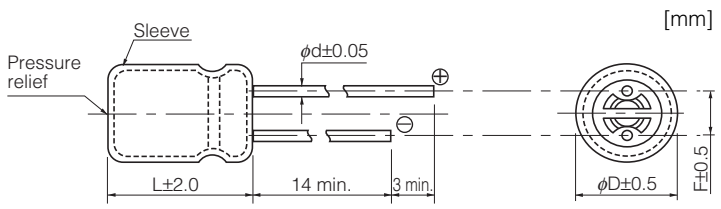
■ Specifications

Category Temp. Range	−25 °C to +105 °C	
Rated W.V. Range	160 V .DC to 450 V .DC	
Nominal Cap. Range	10 µF to 330 µF	
Capacitance Tolerance	±20 % (120 Hz/+20 °C)	
DC Leakage Current	I ≦ 0.06 CV +10 (µA) After 2 minutes application of rated working voltage at +20 °C	
tan δ	Please see the attached standard products list	
Endurance	After following life test with DC voltage and +105 °C±2 °C ripple current value applied (The sum of DC and ripple peak voltage shall not exceed the rated working voltage),when the capacitors are restored to 20 °C, the capacitors shall meet the limits specified below. Duration : ϕ10=8000 hours, ϕ12.5 to ϕ18=10000 hours	
	Capacitance change	±20 % of initial measured value
	tan δ	≦ 200 % of initial specified value
	DC leakage current	≦ initial specified value
Shelf Life	After storage for 1000 hours at +105 °C±2 °C with no voltage applied and then being stabilized at +20 °C, capacitors shall meet the limits specified in Endurance. (With voltage treatment)	

■ Ripple current Frequency Coefficient

Frequency (Hz) / Cap.(µF)	50 ≦ f < 120	120 ≦ f < 300	300 ≦ f < 1 k	1 k ≦ f < 10 k	10 k ≦ f < 30 k	30 k ≦ f ≦100 k
Cap. < 100 µF	0.30	0.40	0.55	0.70	0.90	1.00
100 µF ≦ Cap.	0.35	0.45	0.60	0.75	0.90	1.00

■ Dimensions in mm (not to scale)



(mm)

Body Dia. ϕD	10	12.5	16	18
Lead Dia. ϕd	0.6	0.6	0.8	0.8
Lead space F	5.0	5.0	7.5	7.5

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.
Should a safety concern arise regarding this product, please be sure to contact us immediately.

02 Oct. 2010

■ Standard Products

W.V.	Cap. (±20 %)	Case size		Specification			Lead Length			Part No.	Min. Packaging Q'ty	
		Dia.	Length	Ripple Current (100 kHz) (+105 °C)	tan δ (120 Hz) (+20 °C)	Endurance	Lead Dia.	Lead Space			Straight Leads	Taping
								Straight	Taping ✻B			
(V)	(μF)	(mm)	(mm)	(mA r.m.s.)		(hours)	(mm)	(mm)	(mm)		(pcs.)	(pcs.)
160	22	10	20	500	0.15	8000	0.6	5.0	5.0	EEUED2C220( )	200	500
	33	10	20	580	0.15	8000	0.6	5.0	5.0	EEUED2C330( )	200	500
	47	10	20	750	0.15	8000	0.6	5.0	5.0	EEUED2C470( )	200	500
	68	12.5	20	950	0.15	10000	0.6	5.0	5.0	EEUED2C680( )	200	500
	82	12.5	25	1060	0.15	10000	0.6	5.0	5.0	EEUED2C820( )	200	500
	100	12.5	25	1170	0.15	10000	0.6	5.0	5.0	EEUED2C101( )	200	500
		16	20	1280	0.15	10000	0.8	7.5	7.5	EEUED2C101S( )	100	250
	150	16	25	1400	0.15	10000	0.8	7.5	7.5	EEUED2C151( )	100	250
		18	20	1400	0.15	10000	0.8	7.5	7.5	EEUED2C151S( )	100	250
	220	16	31.5	1700	0.15	10000	0.8	7.5		EEUED2C221	100	
		18	25	1500	0.15	10000	0.8	7.5	7.5	EEUED2C221S( )	100	250
	330	18	31.5	2000	0.15	10000	0.8	7.5		EEUED2C331	50	
200	22	10	20	600	0.15	8000	0.6	5.0	5.0	EEUED2D220( )	200	500
	33	10	20	650	0.15	8000	0.6	5.0	5.0	EEUED2D330( )	200	500
	47	12.5	20	790	0.15	10000	0.6	5.0	5.0	EEUED2D470( )	200	500
	68	12.5	25	950	0.15	10000	0.6	5.0	5.0	EEUED2D680( )	200	500
		16	20	1000	0.15	10000	0.8	7.5	7.5	EEUED2D680S( )	100	250
	82	16	20	1100	0.15	10000	0.8	7.5	7.5	EEUED2D820S( )	100	250
	100	16	25	1300	0.15	10000	0.8	7.5	7.5	EEUED2D101( )	100	250
		18	20	1280	0.15	10000	0.8	7.5	7.5	EEUED2D101S( )	100	250
	150	16	25	1400	0.15	10000	0.8	7.5	7.5	EEUED2D151( )	100	250
	220	18	31.5	2000	0.15	10000	0.8	7.5		EEUED2D221	50	
	330	18	40	2400	0.15	10000	0.8	7.5		EEUED2D331	50	
250	22	10	20	560	0.15	8000	0.6	5.0	5.0	EEUED2E220( )	200	500
	33	12.5	20	710	0.15	10000	0.6	5.0	5.0	EEUED2E330( )	200	500
	47	12.5	25	920	0.15	10000	0.6	5.0	5.0	EEUED2E470( )	200	500
		16	20	990	0.15	10000	0.8	7.5	7.5	EEUED2E470S( )	100	250
	68	16	20	1000	0.15	10000	0.8	7.5	7.5	EEUED2E680S( )	100	250
	82	16	25	1200	0.15	10000	0.8	7.5	7.5	EEUED2E820( )	100	250
		18	20	1200	0.15	10000	0.8	7.5	7.5	EEUED2E820S( )	100	250
	100	16	31.5	1500	0.15	10000	0.8	7.5		EEUED2E101	100	
		18	25	1500	0.15	10000	0.8	7.5	7.5	EEUED2E101S( )	100	250
	150	18	31.5	1800	0.15	10000	0.8	7.5		EEUED2E151	50	
	220	18	40	2100	0.15	10000	0.8	7.5		EEUED2E221	50	
350	10	10	20	350	0.20	8000	0.6	5.0	5.0	EEUED2V100( )	200	500
	22	12.5	20	480	0.20	10000	0.6	5.0	5.0	EEUED2V220( )	200	500
	33	16	20	640	0.20	10000	0.8	7.5	7.5	EEUED2V330S( )	100	250
	47	16	25	800	0.20	10000	0.8	7.5	7.5	EEUED2V470( )	100	250
		18	20	800	0.20	10000	0.8	7.5	7.5	EEUED2V470S( )	100	250
	68	16	31.5	1100	0.20	10000	0.8	7.5		EEUED2V680	100	
		18	25	1000	0.20	10000	0.8	7.5	7.5	EEUED2V680S( )	100	250
	82	18	25	1100	0.20	10000	0.8	7.5	7.5	EEUED2V820S( )	100	250
	100	18	31.5	1200	0.20	10000	0.8	7.5		EEUED2V101	50	

Endurance : 105 °C ϕ10=8000 h, ϕ12.5 to ϕ18=10000 h
When requesting taped product, please put the letter "B" between the "( )". Lead wire pitch B=5 mm, 7.5 mm.
The taping dimensions are explained on p.178 of our Catalog. Please use it as a reference guide.

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.
Should a safety concern arise regarding this product, please be sure to contact us immediately.

■ Standard Products

W.V.	Cap. (±20 %)	Case size		Specification			Lead Length			Part No.	Min. Packaging Q'ty	
		Dia.	Length	Ripple Current (100 kHz) (+105 °C)	tan δ (120 Hz) (+20 °C)	Endurance	Lead Dia.	Lead Space			Straight Leads	Taping
								Straight	Taping ✻B			
(V)	(μF)	(mm)	(mm)	(mA r.m.s.)		(hours)	(mm)	(mm)	(mm)		(pcs.)	(pcs.)
400	10	10	20	300	0.24	8000	0.6	5.0	5.0	EEUED2G100( )	200	500
	15	12.5	20	410	0.24	10000	0.6	5.0	5.0	EEUED2G150( )	200	500
	22	12.5	25	500	0.24	10000	0.6	5.0	5.0	EEUED2G220( )	200	500
		16	20	600	0.24	10000	0.8	7.5	7.5	EEUED2G220S( )	100	250
	33	16	20	730	0.24	10000	0.8	7.5	7.5	EEUED2G330S( )	100	250
	47	16	25	840	0.24	10000	0.8	7.5	7.5	EEUED2G470( )	100	250
		18	20	840	0.24	10000	0.8	7.5	7.5	EEUED2G470S( )	100	250
	68	18	31.5	1200	0.24	10000	0.8	7.5		EEUED2G680	50	
	82	18	40	1500	0.24	10000	0.8	7.5		EEUED2G820	50	
450	10	12.5	20	350	0.24	10000	0.6	5.0	5.0	EEUED2W100( )	200	500
	15	12.5	25	560	0.24	10000	0.6	5.0	5.0	EEUED2W150( )	200	500
	22	16	20	680	0.24	10000	0.8	7.5	7.5	EEUED2W220S( )	100	250
	33	16	31.5	850	0.24	10000	0.8	7.5		EEUED2W330	100	
		18	25	850	0.24	10000	0.8	7.5	7.5	EEUED2W330S( )	100	250
	47	18	31.5	1000	0.24	10000	0.8	7.5		EEUED2W470	50	
	68	18	40	1300	0.24	10000	0.8	7.5		EEUED2W680	50	

Endurance : 105 °C ϕ10=8000 h, ϕ12.5 to ϕ18=10000 h
When requesting taped product, please put the letter "B" between the "( )". Lead wire pitch B=5 mm, 7.5 mm.
The taping dimensions are explained on p.178 of our Catalog. Please use it as a reference guide.

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.
Should a safety concern arise regarding this product, please be sure to contact us immediately.