Snap-in Type

Series: **ED** Type: **TS**

Discontinued
(Last purchasing order : 31/Mar/2015)
(Last shipment : 30/Jun/2015)

■ Features

- Endurance : 105 °C 3000 h
- High ripple current capability in high frequency range.
- RoHS directive compliant

■ Specifications

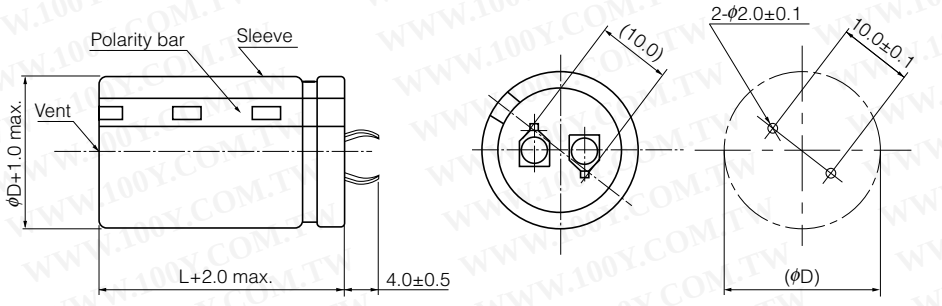
Category Temp. Range	−40 °C to + 105 °C	−25 °C to +105 °C
Rated W.V. Range	200 V.DC to 250 V.DC	400 V.DC to 450 V.DC
Nominal Cap. Range	220 µF to 2200 µF	56 µF to 560 µF
Capacitance Tolerance	±20 % (120 Hz/+20 °C)	
DC Leakage Current	$3\sqrt{CV}$ (µA) max. After 5 minutes application of rated working voltage at +20 °C C : Capacitance (µF) V: W.V. (V.DC)	
tan δ	Please see the attached standard products list	
Endurance	After 3000 hours application of DC voltage with specified ripple current (≦ rated DC working voltage) at +105 °C±2 °C, the capacitors shall meet the following limits.	
	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 within no voltage applied and then being stabilized at +20 °C, capacitors shall meet the limits specified in Endurance (With voltage treatment)	

■ Frequency correction factor for ripple current

	Frequency (Hz)						
	50	60	100	120	500	1 k	10 k to
Correction factor	0.50	0.55	0.68	0.70	0.85	0.90	1.00

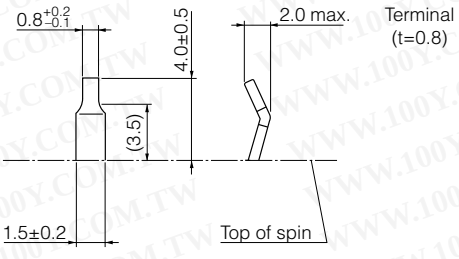
■ Dimensions in mm (not to scale)

(Unit : mm)



Rated voltage etc. indicate to sleeve.

Recommended PWB piercing plan



Standard terminal type does not require terminal trimming process.

01 Sep. 2013

■ Standard Products Discontinued

Endurance : 105 °C 3000 h

W.V. (V. DC)	Cap. (120 Hz) (±20 %) (μF)	Case size Dia. (mm)	Case size Length (mm)	Part No. PET sleeve Terminal Length 4.0 mm (Without Top Plate)	Specification Ripple Current (50 kHz) (+105 °C) (A r.m.s.)	Specification tan δ (120 Hz) (+20 °C) max.	Min. Packaging Q'ty (pcs)
200	270	22	25	EETED2D271HJ	2.03	0.15	200
	330	22	30	EETED2D331HJ	2.23	0.15	200
	390	22	30	EETED2D391HJ	2.44	0.15	200
		25	25	EETED2D391JJ	2.44	0.15	200
	470	22	35	EETED2D471HJ	2.64	0.15	200
		25	30	EETED2D471JJ	2.64	0.15	200
	560	22	40	EETED2D561HJ	3.05	0.15	200
		25	30	EETED2D561JJ	3.05	0.15	200
		30	25	EETED2D561KJ	3.05	0.15	100
	680	22	45	EETED2D681HJ	3.45	0.15	200
		25	35	EETED2D681JJ	3.45	0.15	200
		30	30	EETED2D681KJ	3.45	0.15	100
	820	22	50	EETED2D821HJ	3.76	0.15	200
		25	40	EETED2D821JJ	3.76	0.15	200
		30	30	EETED2D821KJ	3.76	0.15	100
		35	25	EETED2D821LJ	3.76	0.15	100
	1000	25	45	EETED2D102JJ	4.06	0.15	200
		30	35	EETED2D102KJ	4.06	0.15	100
		35	30	EETED2D102LJ	4.06	0.15	100
	1200	30	40	EETED2D122KJ	4.47	0.15	100
		35	35	EETED2D122LJ	4.47	0.15	100
	1500	30	50	EETED2D152KJ	5.08	0.15	100
		35	40	EETED2D152LJ	5.08	0.15	100
✻	1800	35	45	EETED2D182LJ	5.48	0.15	100
✻	2200	35	50	EETED2D222LJ	5.89	0.15	100
220	270	22	30	EETED2Q271HJ	2.03	0.15	200
	330	22	30	EETED2Q331HJ	2.23	0.15	200
		25	25	EETED2Q331JJ	2.23	0.15	200
	390	22	35	EETED2Q391HJ	2.44	0.15	200
		25	30	EETED2Q391JJ	2.44	0.15	200
	470	22	40	EETED2Q471HJ	2.64	0.15	200
		25	30	EETED2Q471JJ	2.64	0.15	200
		30	25	EETED2Q471KJ	2.64	0.15	100
	560	22	45	EETED2Q561HJ	3.05	0.15	200
		25	35	EETED2Q561JJ	3.05	0.15	200
		30	30	EETED2Q561KJ	3.05	0.15	100
	680	25	40	EETED2Q681JJ	3.45	0.15	200
		30	30	EETED2Q681KJ	3.45	0.15	100
		35	25	EETED2Q681LJ	3.45	0.15	100
	820	25	45	EETED2Q821JJ	3.76	0.15	200
		30	35	EETED2Q821KJ	3.76	0.15	100
		35	30	EETED2Q821LJ	3.76	0.15	100
	1000	30	40	EETED2Q102KJ	4.06	0.15	100
		35	35	EETED2Q102LJ	4.06	0.15	100
	1200	30	45	EETED2Q122KJ	4.47	0.15	100
		35	40	EETED2Q122LJ	4.47	0.15	100
✻	1500	35	45	EETED2Q152LJ	5.08	0.15	100
✻	1800	35	50	EETED2Q182LJ	5.48	0.15	100

✻ When capacitors of φ35×45L and φ35×50L are mounted on PWB, reinforce them with mounting clamp or adhesives. (Avoid using adhesives including halogenated compositions.)

■ Standard Products Discontinued

Endurance : 105 °C 3000 h

W.V. (V. DC)	Cap. (120 Hz) (±20 %) (μF)	Case size Dia. (mm)	Case size Length (mm)	Part No. PET sleeve Terminal Length 4.0 mm (Without Top Plate)	Specification Ripple Current (50 kHz) (+105 °C) (A r.m.s.)	Specification tan δ (120 Hz) (+20 °C) max.	Min. Packaging Q'ty (pcs)
250	220	22	30	EETED2E221HJ	1.83	0.15	200
	270	22	30	EETED2E271HJ	2.03	0.15	200
		25	25	EETED2E271JJ	2.03	0.15	200
	330	22	35	EETED2E331HJ	2.23	0.15	200
		25	30	EETED2E331JJ	2.23	0.15	200
	390	22	40	EETED2E391HJ	2.44	0.15	200
		25	30	EETED2E391JJ	2.44	0.15	200
		30	25	EETED2E391KJ	2.44	0.15	100
	470	22	45	EETED2E471HJ	2.64	0.15	200
		25	35	EETED2E471JJ	2.64	0.15	200
		30	30	EETED2E471KJ	2.64	0.15	100
	560	25	40	EETED2E561JJ	3.05	0.15	200
		30	30	EETED2E561KJ	3.05	0.15	100
		35	25	EETED2E561LJ	3.05	0.15	100
	680	25	45	EETED2E681JJ	3.45	0.15	200
		30	35	EETED2E681KJ	3.45	0.15	100
		35	30	EETED2E681LJ	3.45	0.15	100
	820	30	40	EETED2E821KJ	3.76	0.15	100
		35	35	EETED2E821LJ	3.76	0.15	100
	1000	30	50	EETED2E102KJ	4.06	0.15	100
		35	40	EETED2E102LJ	4.06	0.15	100
✻	1200	35	45	EETED2E122LJ	4.47	0.15	100
✻	1500	35	50	EETED2E152LJ	5.08	0.15	100
400	82	22	25	EETED2G820HJ	1.14	0.15	200
	100	22	30	EETED2G101HJ	1.30	0.15	200
		25	25	EETED2G101JJ	1.30	0.15	200
	120	22	35	EETED2G121HJ	1.46	0.15	200
		25	30	EETED2G121JJ	1.46	0.15	200
	150	22	40	EETED2G151HJ	1.53	0.15	200
		25	30	EETED2G151JJ	1.53	0.15	200
		30	25	EETED2G151KJ	1.53	0.15	100
	180	22	45	EETED2G181HJ	1.60	0.15	200
		25	35	EETED2G181JJ	1.60	0.15	200
		30	30	EETED2G181KJ	1.60	0.15	100
	220	22	50	EETED2G221HJ	2.03	0.15	200
		25	40	EETED2G221JJ	2.03	0.15	200
		30	30	EETED2G221KJ	2.03	0.15	100
		35	25	EETED2G221LJ	2.03	0.15	100
	270	25	45	EETED2G271JJ	2.23	0.15	200
		30	35	EETED2G271KJ	2.23	0.15	100
		35	30	EETED2G271LJ	2.23	0.15	100
	330	30	40	EETED2G331KJ	2.44	0.15	100
		35	30	EETED2G331LJ	2.44	0.15	100
	390	30	45	EETED2G391KJ	2.64	0.15	100
		35	35	EETED2G391LJ	2.64	0.15	100
	470	35	40	EETED2G471LJ	2.84	0.15	100
✻	560	35	45	EETED2G561LJ	3.05	0.15	100

✻ When capacitors of φ35×45L and φ35×50L are mounted on PWB, reinforce them with mounting clamp or adhesives. (Avoid using adhesives including halogenated compositions.)

■ Standard Products Discontinued

Endurance : 105 °C 3000 h

W.V. (V. DC)	Cap. (120 Hz) (±20 %) (μF)	Case size Dia. (mm)	Case size Length (mm)	Part No. PET sleeve Terminal Length 4.0 mm (Without Top Plate)	Specification Ripple Current (50 kHz) (+105 °C) (A r.m.s.)	Specification tan δ (120 Hz) (+20 °C) max.	Min. Packaging Q'ty (pcs)
420	68	22	25	EETED2S680HJ	1.08	0.15	200
	82	22	30	EETED2S820HJ	1.14	0.15	200
		25	25	EETED2S820JJ	1.14	0.15	200
	100	22	30	EETED2S101HJ	1.30	0.15	200
		25	25	EETED2S101JJ	1.30	0.15	200
	120	22	35	EETED2S121HJ	1.46	0.15	200
		25	30	EETED2S121JJ	1.46	0.15	200
	150	22	40	EETED2S151HJ	1.53	0.15	200
		25	35	EETED2S151JJ	1.53	0.15	200
		30	25	EETED2S151KJ	1.53	0.15	100
	180	22	45	EETED2S181HJ	1.60	0.15	200
		25	40	EETED2S181JJ	1.60	0.15	200
		30	30	EETED2S181KJ	1.60	0.15	100
		35	25	EETED2S181LJ	1.60	0.15	100
	220	25	45	EETED2S221JJ	2.03	0.15	200
		30	35	EETED2S221KJ	2.03	0.15	100
		35	30	EETED2S221LJ	2.03	0.15	100
	270	25	50	EETED2S271JJ	2.40	0.15	200
		30	40	EETED2S271KJ	2.40	0.15	100
		35	30	EETED2S271LJ	2.40	0.15	100
	330	30	45	EETED2S331KJ	2.54	0.15	100
		35	35	EETED2S331LJ	2.54	0.15	100
	390	30	50	EETED2S391KJ	2.73	0.15	100
		35	40	EETED2S391LJ	2.73	0.15	100
✻	470	35	45	EETED2S471LJ	3.18	0.15	100
450	56	22	25	EETED2W560HJ	0.95	0.15	200
	68	22	30	EETED2W680HJ	1.08	0.15	200
		25	25	EETED2W680JJ	1.08	0.15	200
	82	22	30	EETED2W820HJ	1.14	0.15	200
		25	25	EETED2W820JJ	1.14	0.15	200
	100	22	35	EETED2W101HJ	1.30	0.15	200
		25	30	EETED2W101JJ	1.30	0.15	200
	120	22	40	EETED2W121HJ	1.46	0.15	200
		25	35	EETED2W121JJ	1.46	0.15	200
		30	25	EETED2W121KJ	1.46	0.15	100
	150	22	45	EETED2W151HJ	1.53	0.15	200
		25	40	EETED2W151JJ	1.53	0.15	200
		30	30	EETED2W151KJ	1.53	0.15	100
		35	25	EETED2W151LJ	1.53	0.15	100
	180	22	50	EETED2W181HJ	1.60	0.15	200
		25	40	EETED2W181JJ	1.60	0.15	200
		30	30	EETED2W181KJ	1.60	0.15	100
		35	25	EETED2W181LJ	1.60	0.15	100
	220	25	45	EETED2W221JJ	2.03	0.15	200
		30	35	EETED2W221KJ	2.03	0.15	100
		35	30	EETED2W221LJ	2.03	0.15	100
	270	30	40	EETED2W271KJ	2.45	0.15	100
		35	35	EETED2W271LJ	2.45	0.15	100
	330	30	50	EETED2W331KJ	2.64	0.15	100
		35	40	EETED2W331LJ	2.64	0.15	100
	390	35	40	EETED2W391LJ	2.82	0.15	100
✻	470	35	50	EETED2W471LJ	3.53	0.15	100

✻ When capacitors of φ35×45L and φ35×50L are mounted on PWB, reinforce them with mounting clamp or adhesives. (Avoid using adhesives including halogenated compositions.)