

Snap-in Type

Series: ED Type : TS

Country of Origin

- Features**
 - Endurance: 105°C 2000h
 - High ripple current capability in high frequency range.
 - High ripple current and miniaturization to help miniaturization of equipment.

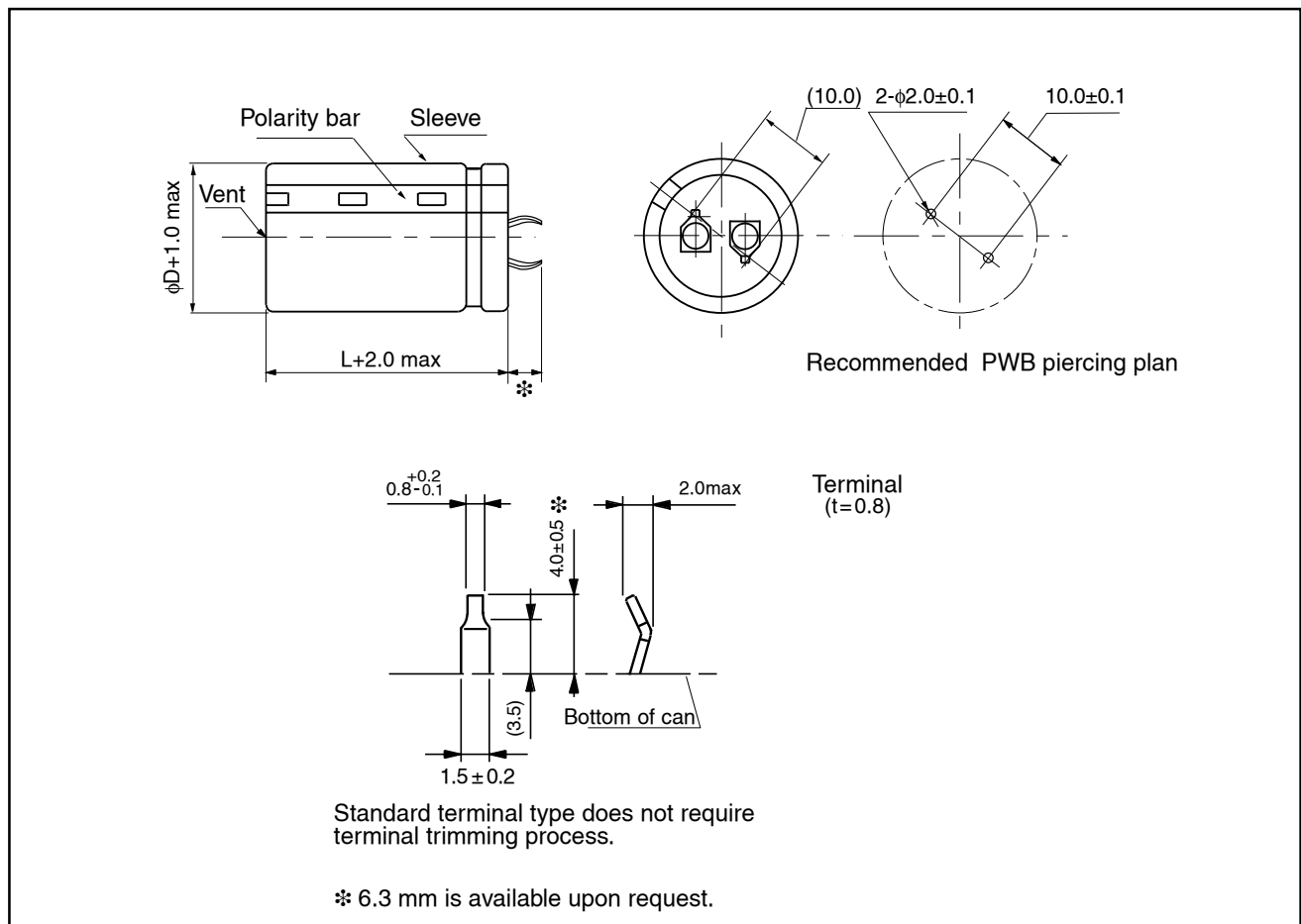
- Japan
- U.S.A
- Malaysia



Specifications

| | | | | | | | | |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------|------|------|------|------|--------|
| Category temp. range | -40 to +105°C | | -25 to +105°C | | | | | |
| Rated W.V. Range | 200,220,250 V.DC | | 400, 420, 450 V .DC | | | | | |
| Nominal Cap. Range | 220 to 2200 μF | | 56 to 560 μ F | | | | | |
| Capacitance Tolerance | ±20 % (120Hz/+20°C) | | | | | | | |
| DC Leakage Current | 3√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 | | | | | | | |
| Frequency Correction Factor for Ripple Current | Frequency (Hz) | 50 | 60 | 100 | 120 | 500 | 1k | 10k to |
| | Correction Factor | 0.5 | 0.55 | 0.68 | 0.70 | 0.85 | 0.90 | 1.00 |
| Endurance | After 2000 hours application of DC voltage with specified ripple current (≤ rated DC working voltage) at +105°C, the capacitor shall meet the following limits. | | | | | | | |
| | Capacitance change | ±20 % of initial measured value | | | | | | |
| | tan δ | ≤ 200 % of initial specified value | | | | | | |
| Shelf Life | After storage for 1000 hours at +105±2 °C with no voltage applied and then being stabilized at +20 °C, capacitors shall meet the limits specified in Endurance(With voltage treatment) | | | | | | | |

Dimensions in mm (not to scale)



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■ Standard Products

| W.V. (V) | Cap. (±20%) (μF) | Case size | | Specification | | Part No. | Part No. | MinPackagingQty (pcs) |
|-------------|------------------------|--------------|----------------|----------------------------------------------|-----------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|--------------------------|
| | | Dia. (mm) | Length (mm) | Ripple current (50kHz) (+105°C) (A) | tan δ (120Hz) (+20°C) | PVC sleeve Terminal Length 4.0mm (Without P.V.C.plate) | PET sleeve Terminal Length 4.0mm (Without P.V.C.plate) | |
| 200 | 270 | 22 | 25 | 2.03 | 0.15 | EETED2D271H | EETED2D271HJ | 200 |
| | 330 | 22 | 30 | 2.23 | 0.15 | EETED2D331H | EETED2D331HJ | 200 |
| | 390 | 22 | 30 | 2.44 | 0.15 | EETED2D391H | EETED2D391HJ | 200 |
| | | 25 | 25 | 2.44 | 0.15 | EETED2D391J | EETED2D391JJ | 200 |
| | 470 | 22 | 35 | 2.64 | 0.15 | EETED2D471H | EETED2D471HJ | 200 |
| | | 25 | 30 | 2.64 | 0.15 | EETED2D471J | EETED2D471JJ | 200 |
| | 560 | 22 | 40 | 3.05 | 0.15 | EETED2D561H | EETED2D561HJ | 200 |
| | | 25 | 30 | 3.05 | 0.15 | EETED2D561J | EETED2D561JJ | 200 |
| | | 30 | 25 | 3.05 | 0.15 | EETED2D561K | EETED2D561KJ | 200 |
| | 680 | 22 | 45 | 3.45 | 0.15 | EETED2D681H | EETED2D681HJ | 200 |
| | | 25 | 35 | 3.45 | 0.15 | EETED2D681J | EETED2D681JJ | 200 |
| | | 30 | 30 | 3.45 | 0.15 | EETED2D681K | EETED2D681KJ | 200 |
| | 820 | 22 | 50 | 3.76 | 0.15 | EETED2D821H | EETED2D821HJ | 200 |
| | | 25 | 40 | 3.76 | 0.15 | EETED2D821J | EETED2D821JJ | 200 |
| | | 30 | 30 | 3.76 | 0.15 | EETED2D821K | EETED2D821KJ | 200 |
| | | 35 | 25 | 3.76 | 0.15 | EETED2D821L | EETED2D821LJ | 200 |
| | 1000 | 25 | 45 | 4.06 | 0.15 | EETED2D102J | EETED2D102JJ | 200 |
| | | 30 | 35 | 4.06 | 0.15 | EETED2D102K | EETED2D102KJ | 100 |
| | | 35 | 30 | 4.06 | 0.15 | EETED2D102L | EETED2D102LJ | 200 |
| | 1200 | 30 | 40 | 4.47 | 0.15 | EETED2D122K | EETED2D122KJ | 100 |
| 35 | | 35 | 4.47 | 0.15 | EETED2D122L | EETED2D122LJ | 100 | |
| 1500 | 30 | 50 | 5.08 | 0.15 | EETED2D152K | EETED2D152KJ | 100 | |
| | 35 | 40 | 5.08 | 0.15 | EETED2D152L | EETED2D152LJ | 100 | |
| 1800 | 35 | 45 | 5.48 | 0.15 | EETED2D182L | EETED2D182LJ | 100 | |
| 2200 | 35 | 50 | 5.89 | 0.15 | EETED2D222L | EETED2D222LJ | 100 | |
| 220 | 270 | 22 | 30 | 2.03 | 0.15 | EETED2Q271H | EETED2Q271HJ | 200 |
| | 330 | 22 | 30 | 2.23 | 0.15 | EETED2Q331H | EETED2Q331HJ | 200 |
| | | 25 | 25 | 2.23 | 0.15 | EETED2Q331J | EETED2Q331JJ | 200 |
| | 390 | 22 | 35 | 2.44 | 0.15 | EETED2Q391H | EETED2Q391HJ | 200 |
| | | 25 | 30 | 2.44 | 0.15 | EETED2Q391J | EETED2Q391JJ | 200 |
| | 470 | 22 | 40 | 2.64 | 0.15 | EETED2Q471H | EETED2Q471HJ | 200 |
| | | 25 | 30 | 2.64 | 0.15 | EETED2Q471J | EETED2Q471JJ | 200 |
| | | 30 | 25 | 2.64 | 0.15 | EETED2Q471K | EETED2Q471KJ | 200 |
| | 560 | 22 | 45 | 3.05 | 0.15 | EETED2Q561H | EETED2Q561HJ | 200 |
| | | 22 | 35 | 3.05 | 0.15 | EETED2Q561J | EETED2Q561JJ | 200 |
| | | 30 | 30 | 3.05 | 0.15 | EETED2Q561K | EETED2Q561KJ | 200 |
| | 680 | 25 | 40 | 3.45 | 0.15 | EETED2Q681J | EETED2Q681JJ | 200 |
| | | 30 | 30 | 3.45 | 0.15 | EETED2Q681K | EETED2Q681KJ | 200 |
| | | 35 | 25 | 3.45 | 0.15 | EETED2Q681L | EETED2Q681LJ | 200 |
| 820 | 25 | 45 | 3.76 | 0.15 | EETED2Q821J | EETED2Q821JJ | 200 | |
| | 30 | 35 | 3.76 | 0.15 | EETED2Q821K | EETED2Q821KJ | 100 | |

Endurance : 105°C 2000h
Terminal Pitch : 10mm

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.)

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. July,2005

■ Standard Products

| W.V. (V) | Cap. (±20%) (μF) | Case size | | Specification | | Part No. | Part No. | MinPackagingQty (pcs) |
|-------------|------------------------|--------------|----------------|----------------------------------------------|-----------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|--------------------------|
| | | Dia. (mm) | Length (mm) | Ripple current (50kHz) (+105°C) (A) | tan δ (120Hz) (+20°C) | PVC sleeve Terminal Length 4.0mm (Without P.V.C.plate) | PET sleeve Terminal Length 4.0mm (Without P.V.C.plate) | |
| 220 | 820 | 35 | 30 | 3.76 | 0.15 | EETED2Q821L | EETED2Q821LJ | 200 |
| | 1000 | 30 | 40 | 4.06 | 0.15 | EETED2Q102K | EETED2Q102KJ | 100 |
| | | 35 | 35 | 4.06 | 0.15 | EETED2Q102L | EETED2Q102LJ | 100 |
| | 1200 | 30 | 45 | 4.47 | 0.15 | EETED2Q122K | EETED2Q122KJ | 100 |
| | | 35 | 40 | 4.47 | 0.15 | EETED2Q122L | EETED2Q122LJ | 100 |
| | 1500 | 35 | 45 | 5.08 | 0.15 | EETED2Q152L | EETED2Q152LJ | 100 |
| 1800 | 35 | 50 | 5.48 | 0.15 | EETED2Q182L | EETED2Q182LJ | 100 | |
| 250 | 220 | 22 | 30 | 1.83 | 0.15 | EETED2E221H | EETED2E221HJ | 200 |
| | 270 | 22 | 30 | 2.03 | 0.15 | EETED2E271H | EETED2E271HJ | 200 |
| | | 25 | 25 | 2.03 | 0.15 | EETED2E271J | EETED2E271JJ | 200 |
| | 330 | 22 | 35 | 2.23 | 0.15 | EETED2E331H | EETED2E331HJ | 200 |
| | | 25 | 30 | 2.23 | 0.15 | EETED2E331J | EETED2E331JJ | 200 |
| | 390 | 22 | 40 | 2.44 | 0.15 | EETED2E391H | EETED2E391HJ | 200 |
| | | 25 | 30 | 2.44 | 0.15 | EETED2E391J | EETED2E391JJ | 200 |
| | | 30 | 25 | 2.44 | 0.15 | EETED2E391K | EETED2E391KJ | 200 |
| | 470 | 22 | 45 | 2.64 | 0.15 | EETED2E471H | EETED2E471HJ | 200 |
| | | 25 | 35 | 2.64 | 0.15 | EETED2E471J | EETED2E471JJ | 200 |
| | | 30 | 30 | 2.64 | 0.15 | EETED2E471K | EETED2E471KJ | 200 |
| | 560 | 25 | 40 | 3.05 | 0.15 | EETED2E561J | EETED2E561JJ | 200 |
| | | 30 | 30 | 3.05 | 0.15 | EETED2E561K | EETED2E561KJ | 200 |
| | | 35 | 25 | 3.05 | 0.15 | EETED2E561L | EETED2E561LJ | 200 |
| | 680 | 25 | 45 | 3.45 | 0.15 | EETED2E681J | EETED2E681JJ | 200 |
| | | 30 | 35 | 3.45 | 0.15 | EETED2E681K | EETED2E681KJ | 100 |
| | | 35 | 30 | 3.45 | 0.15 | EETED2E681L | EETED2E681LJ | 200 |
| | 820 | 30 | 40 | 3.76 | 0.15 | EETED2E821K | EETED2E821KJ | 100 |
| | | 35 | 35 | 3.76 | 0.15 | EETED2E821L | EETED2E821LJ | 100 |
| | 1000 | 30 | 50 | 4.06 | 0.15 | EETED2E102K | EETED2E102KJ | 100 |
| 35 | | 40 | 4.06 | 0.15 | EETED2E102L | EETED2E102LJ | 100 | |
| 1200 | 35 | 45 | 4.47 | 0.15 | EETED2E122L | EETED2E122LJ | 100 | |
| 1500 | 35 | 50 | 5.08 | 0.15 | EETED2E152L | EETED2E152LJ | 100 | |
| 400 | 82 | 22 | 25 | 1.14 | 0.15 | EETED2G820H | EETED2G820HJ | 200 |
| | 100 | 22 | 30 | 1.30 | 0.15 | EETED2G101H | EETED2G101HJ | 200 |
| | | 25 | 25 | 1.30 | 0.15 | EETED2G101J | EETED2G101JJ | 200 |
| | 120 | 22 | 35 | 1.46 | 0.15 | EETED2G121H | EETED2G121HJ | 200 |
| | | 25 | 30 | 1.46 | 0.15 | EETED2G121J | EETED2G121JJ | 200 |
| | 150 | 22 | 40 | 1.53 | 0.15 | EETED2G151H | EETED2G151HJ | 200 |
| | | 25 | 30 | 1.53 | 0.15 | EETED2G151J | EETED2G151JJ | 200 |
| | | 30 | 25 | 1.53 | 0.15 | EETED2G151K | EETED2G151KJ | 200 |
| | 180 | 22 | 45 | 1.60 | 0.15 | EETED2G181H | EETED2G181HJ | 200 |
| | | 25 | 35 | 1.60 | 0.15 | EETED2G181J | EETED2G181JJ | 200 |
| 30 | | 30 | 1.60 | 0.15 | EETED2G181K | EETED2G181KJ | 200 | |

Endurance : 105°C 2000h

Terminal Pitch : 10mm

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.)

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■ Standard Products

| W.V. (V) | Cap. (±20%) (μF) | Case size | | Specification | | Part No. | Part No. | MinPackagingQty (pcs) |
|-------------|------------------------|--------------|----------------|----------------------------------------------|-----------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|--------------------------|
| | | Dia. (mm) | Length (mm) | Ripple current (50kHz) (+105°C) (A) | tan δ (120Hz) (+20°C) | PVC sleeve Terminal Length 4.0mm (Without P.V.C.plate) | PET sleeve Terminal Length 4.0mm (Without P.V.C.plate) | |
| 400 | 220 | 22 | 50 | 2.03 | 0.15 | EETED2G221H | EETED2G221HJ | 200 |
| | | 25 | 40 | 2.03 | 0.15 | EETED2G221J | EETED2G221JJ | 200 |
| | | 30 | 30 | 2.03 | 0.15 | EETED2G221K | EETED2G221KJ | 200 |
| | | 35 | 25 | 2.03 | 0.15 | EETED2G221L | EETED2G221LJ | 200 |
| | 270 | 25 | 45 | 2.23 | 0.15 | EETED2G271J | EETED2G271JJ | 200 |
| | | 30 | 35 | 2.23 | 0.15 | EETED2G271K | EETED2G271KJ | 100 |
| | | 35 | 30 | 2.23 | 0.15 | EETED2G271L | EETED2G271LJ | 200 |
| | 330 | 30 | 40 | 2.44 | 0.15 | EETED2G331K | EETED2G331KJ | 100 |
| | | 35 | 30 | 2.44 | 0.15 | EETED2G331L | EETED2G331LJ | 200 |
| | 390 | 30 | 45 | 2.64 | 0.15 | EETED2G391K | EETED2G391KJ | 100 |
| | | 35 | 35 | 2.64 | 0.15 | EETED2G391L | EETED2G391LJ | 100 |
| | 470 | 35 | 40 | 2.84 | 0.15 | EETED2G471L | EETED2G471LJ | 100 |
| | 560 | 35 | 45 | 3.05 | 0.15 | EETED2G561L | EETED2G561LJ | 100 |
| 420 | 68 | 22 | 25 | 1.08 | 0.15 | EETED2S680H | EETED2S680HJ | 200 |
| | | 22 | 30 | 1.14 | 0.15 | EETED2S820H | EETED2S820HJ | 200 |
| | 82 | 25 | 25 | 1.14 | 0.15 | EETED2S820J | EETED2S820JJ | 200 |
| | | 22 | 30 | 1.30 | 0.15 | EETED2S101H | EETED2S101HJ | 200 |
| | 100 | 25 | 25 | 1.30 | 0.15 | EETED2S101J | EETED2S101JJ | 200 |
| | | 22 | 35 | 1.46 | 0.15 | EETED2S121H | EETED2S121HJ | 200 |
| | 120 | 25 | 30 | 1.46 | 0.15 | EETED2S121J | EETED2S121JJ | 200 |
| | | 22 | 40 | 1.53 | 0.15 | EETED2S151H | EETED2S151HJ | 200 |
| | 150 | 25 | 35 | 1.53 | 0.15 | EETED2S151J | EETED2S151JJ | 200 |
| | | 30 | 25 | 1.53 | 0.15 | EETED2S151K | EETED2S151KJ | 200 |
| | | 22 | 45 | 1.60 | 0.15 | EETED2S181H | EETED2S181HJ | 200 |
| | 180 | 25 | 40 | 1.60 | 0.15 | EETED2S181J | EETED2S181JJ | 200 |
| | | 30 | 30 | 1.60 | 0.15 | EETED2S181K | EETED2S181KJ | 200 |
| | | 35 | 25 | 1.60 | 0.15 | EETED2S181L | EETED2S181LJ | 200 |
| | | 25 | 45 | 2.03 | 0.15 | EETED2S221J | EETED2S221JJ | 200 |
| | 220 | 30 | 35 | 2.03 | 0.15 | EETED2S221K | EETED2S221KJ | 100 |
| | | 35 | 30 | 2.03 | 0.15 | EETED2S221L | EETED2S221LJ | 200 |
| | | 25 | 50 | 2.40 | 0.15 | EETED2S271J | EETED2S271JJ | 200 |
| | 270 | 30 | 40 | 2.40 | 0.15 | EETED2S271K | EETED2S271KJ | 100 |
| | | 35 | 30 | 2.40 | 0.15 | EETED2S271L | EETED2S271LJ | 200 |
| | | 30 | 45 | 2.54 | 0.15 | EETED2S331K | EETED2S331KJ | 100 |
| 330 | 35 | 35 | 2.54 | 0.15 | EETED2S331L | EETED2S331LJ | 100 | |
| | 30 | 50 | 2.73 | 0.15 | EETED2S391K | EETED2S391KJ | 100 | |
| 390 | 35 | 40 | 2.73 | 0.15 | EETED2S391L | EETED2S391LJ | 100 | |
| | 35 | 45 | 3.18 | 0.15 | EETED2S471L | EETED2S471LJ | 100 | |
| 450 | 56 | 22 | 25 | 0.95 | 0.15 | EETED2W560H | EETED2W560HJ | 200 |
| | 68 | 22 | 30 | 1.08 | 0.15 | EETED2W680H | EETED2W680HJ | 200 |
| | | 25 | 25 | 1.08 | 0.15 | EETED2W680J | EETED2W680JJ | 200 |

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Terminal Pitch : 10mm

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.)

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|-------------|------------------------|--------------|----------------|----------------------------------------------|-----------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|--------------------------|
| | | Dia. (mm) | Length (mm) | Ripple current (50kHz) (+105°C) (A) | tan δ (120Hz) (+20°C) | PVC sleeve Terminal Length 4.0mm (Without P.V.C.plate) | PET sleeve Terminal Length 4.0mm (Without P.V.C.plate) | |
| 450 | 82 | 22 | 30 | 1.14 | 0.15 | EETED2W820H | EETED2W820HJ | 200 |
| | | 25 | 25 | 1.14 | 0.15 | EETED2W820J | EETED2W820JJ | 200 |
| | 100 | 22 | 35 | 1.30 | 0.15 | EETED2W101H | EETED2W101HJ | 200 |
| | | 25 | 30 | 1.30 | 0.15 | EETED2W101J | EETED2W101JJ | 200 |
| | 120 | 22 | 40 | 1.46 | 0.15 | EETED2W121H | EETED2W121HJ | 200 |
| | | 25 | 35 | 1.46 | 0.15 | EETED2W121J | EETED2W121JJ | 200 |
| | | 30 | 25 | 1.46 | 0.15 | EETED2W121K | EETED2W121KJ | 200 |
| | 150 | 22 | 45 | 1.53 | 0.15 | EETED2W151H | EETED2W151HJ | 200 |
| | | 25 | 40 | 1.53 | 0.15 | EETED2W151J | EETED2W151JJ | 200 |
| | | 30 | 30 | 1.53 | 0.15 | EETED2W151K | EETED2W151KJ | 200 |
| | | 35 | 25 | 1.53 | 0.15 | EETED2W151L | EETED2W151LJ | 200 |
| | 180 | 22 | 50 | 1.60 | 0.15 | EETED2W181H | EETED2W181HJ | 200 |
| | | 25 | 40 | 1.60 | 0.15 | EETED2W181J | EETED2W181JJ | 200 |
| | | 30 | 30 | 1.60 | 0.15 | EETED2W181K | EETED2W181KJ | 200 |
| | | 35 | 25 | 1.60 | 0.15 | EETED2W181L | EETED2W181LJ | 200 |
| | 220 | 25 | 45 | 2.03 | 0.15 | EETED2W221J | EETED2W221JJ | 200 |
| | | 30 | 35 | 2.03 | 0.15 | EETED2W221K | EETED2W221KJ | 100 |
| | | 35 | 30 | 2.03 | 0.15 | EETED2W221L | EETED2W221LJ | 200 |
| | 270 | 30 | 40 | 2.45 | 0.15 | EETED2W271K | EETED2W271KJ | 100 |
| | | 35 | 35 | 2.45 | 0.15 | EETED2W271L | EETED2W271LJ | 100 |
| 330 | 30 | 50 | 2.64 | 0.15 | EETED2W331K | EETED2W331KJ | 100 | |
| | 35 | 40 | 2.64 | 0.15 | EETED2W331L | EETED2W331LJ | 100 | |
| 390 | 35 | 40 | 2.82 | 0.15 | EETED2W391L | EETED2W391LJ | 100 | |
| 470 | 35 | 50 | 3.53 | 0.15 | EETED2W471L | EETED2W471LJ | 100 | |

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