

### T-HA Series 105°C, 3000 hours

- Long Life - endurance rating of 3000 hours at 105°C
- 4 or 5 terminal mounting provides stability and keyed polarity
- Extended higher CV ratings
- Can vent construction



|                             |                                                                                                                             |                               |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Rated Working Voltage:      | 16 ~ 250 VDC                                                                                                                | 350 ~ 450 VDC                 |
| Operating Temperature:      | -40 ~ +105°C                                                                                                                | -25 ~ +105°C                  |
| Nominal Capacitance:        | 1000~ 250000µF (±20% tolerance)                                                                                             | 330 ~ 2700µF (±20% tolerance) |
| Leakage Current:            | 3√CV (µA) max. after 5 minutes; C = Capacitance in µF, V = WV                                                               |                               |
| Ripple Current Multipliers: | Frequency(Hz):                                                                                                              | 50 60 100~120 500 1k 10k~     |
|                             | 16~100WV:                                                                                                                   | 0.93 0.95 1.0 1.05 1.08 1.15  |
|                             | 160~450WV:                                                                                                                  | 0.75 0.8 1.0 1.2 1.25 1.4     |
| Endurance:                  | 3000 hours at +105°C with maximum specified ripple current (see page 6)                                                     |                               |
|                             | *Use of temperature ripple current multipliers may limit life to the hours specified for the maximum operating temperature. |                               |
|                             |                                                                                                                             |                               |

### Part Number System

E

C

E

Common Code / Number of Terminals

ECET

4 terminal  
(ϕ35 & 40mm dia.)

ECEP

5 terminal  
(ϕ40 & 50mm dia.)

Voltage Code

A

Series Code

A

Standard

B

Extended

Capacitance Code

Diameter Code

A

Terminal Style (see pg.40)

Ratings:

Standard

Extended

6.3mm length snap-in (standard):

A

X

4.0mm length "short" terminal:

4

5

4.0mm length straight pin with standoff:

E

Y

### T-HA Standard Ratings

| Cap. (µF)                           | Size (mm) D x L | Max 105°C R.C. (A <sub>ms</sub> ) |        | Max 20°C ESR (Ω) |       | Panasonic Part Number |
|-------------------------------------|-----------------|-----------------------------------|--------|------------------|-------|-----------------------|
|                                     |                 | 120 Hz                            | 10kHz~ | 120Hz            | 20kHz |                       |
| <b>16 VDC Working, 20 VDC Surge</b> |                 |                                   |        |                  |       |                       |
| 39000                               | 35 x 40         | 5.10                              | 5.87   | 0.022            | 0.020 | ECET1CA393EA          |
| 47000                               | 40 x 40         | 5.50                              | 6.33   | 0.020            | 0.018 | ECET1CA473FA          |
| 56000                               | 35 x 50         | 6.00                              | 6.90   | 0.019            | 0.017 | ECET1CA563EA          |
| 68000                               | 35 x 63         | 6.62                              | 7.61   | 0.017            | 0.015 | ECET1CA683EA          |
|                                     | 40 x 50         | 7.29                              | 8.38   | 0.015            | 0.014 | ECET1CA683FA          |
| 82000                               | 40 x 63         | 7.66                              | 8.81   | 0.017            | 0.015 | ECET1CA823FA          |
| 100000                              | 35 x 80         | 8.03                              | 9.23   | 0.015            | 0.013 | ECET1CA104EA          |
| 120000                              | 35 x 105        | 8.71                              | 10.02  | 0.014            | 0.012 | ECET1CA124EA          |
|                                     | 40 x 80         | 8.79                              | 10.11  | 0.014            | 0.012 | ECET1CA124FA          |
|                                     | 50 x 50         | 9.02                              | 10.37  | 0.015            | 0.014 | ECET1CA124HA          |
| 150000                              | 40 x 105        | 9.88                              | 11.36  | 0.013            | 0.012 | ECET1CA154FA          |
|                                     | 50 x 63         | 10.15                             | 11.67  | 0.014            | 0.013 | ECEP1CA154HA          |
| 180000                              | 50 x 80         | 11.02                             | 12.67  | 0.013            | 0.012 | ECEP1CA184HA          |
| 220000                              | 50 x 92         | 11.71                             | 13.47  | 0.012            | 0.011 | ECEP1CA224HA          |
| 250000                              | 50 x 105        | 12.31                             | 14.16  | 0.011            | 0.010 | ECEP1CA254HA          |
| <b>35 VDC Working, 44 VDC Surge</b> |                 |                                   |        |                  |       |                       |
| 18000                               | 35 x 40         | 4.30                              | 4.95   | 0.028            | 0.021 | ECET1VA183EA          |
| 22000                               | 35 x 50         | 5.00                              | 5.75   | 0.023            | 0.017 | ECET1VA223EA          |
|                                     | 40 x 40         | 5.00                              | 5.75   | 0.023            | 0.017 | ECET1VA223FA          |
| 27000                               | 35 x 63         | 5.53                              | 6.36   | 0.025            | 0.018 | ECET1VA273EA          |
|                                     | 40 x 50         | 5.44                              | 6.26   | 0.020            | 0.015 | ECET1VA273FA          |
| 33000                               | 40 x 63         | 6.61                              | 7.60   | 0.019            | 0.014 | ECET1VA333FA          |
| 39000                               | 35 x 80         | 6.52                              | 7.50   | 0.019            | 0.014 | ECET1VA393EA          |
| 47000                               | 35 x 105        | 8.07                              | 9.28   | 0.017            | 0.013 | ECET1VA473EA          |
|                                     | 40 x 80         | 7.79                              | 8.96   | 0.018            | 0.013 | ECET1VA473FA          |
|                                     | 50 x 50         | 8.25                              | 9.49   | 0.021            | 0.016 | ECEP1VA473HA          |
| 56000                               | 50 x 63         | 9.07                              | 10.43  | 0.019            | 0.014 | ECEP1VA563HA          |
| 68000                               | 40 x 105        | 9.27                              | 10.66  | 0.016            | 0.012 | ECET1VA683FA          |
|                                     | 50 x 80         | 10.07                             | 11.58  | 0.017            | 0.013 | ECEP1VA683HA          |
| 82000                               | 50 x 92         | 10.89                             | 12.52  | 0.015            | 0.011 | ECEP1VA823HA          |
| 100000                              | 50 x 105        | 11.75                             | 13.51  | 0.013            | 0.010 | ECEP1VA104HA          |
| <b>25 VDC Working, 32 VDC Surge</b> |                 |                                   |        |                  |       |                       |
| 27000                               | 35 x 40         | 4.80                              | 5.52   | 0.018            | 0.017 | ECET1EA273EA          |
| 33000                               | 35 x 50         | 5.50                              | 6.33   | 0.018            | 0.016 | ECET1EA333EA          |
|                                     | 40 x 40         | 5.50                              | 6.33   | 0.018            | 0.016 | ECET1EA333FA          |
| 47000                               | 35 x 63         | 6.56                              | 7.54   | 0.017            | 0.015 | ECET1EA473EA          |
|                                     | 40 x 50         | 6.47                              | 7.44   | 0.015            | 0.014 | ECET1EA473FA          |
| 56000                               | 35 x 80         | 7.25                              | 8.34   | 0.015            | 0.013 | ECET1EA563EA          |
|                                     | 40 x 63         | 7.17                              | 8.25   | 0.014            | 0.013 | ECET1EA563FA          |
| 82000                               | 35 x 105        | 8.58                              | 9.87   | 0.013            | 0.012 | ECET1EA823EA          |
|                                     | 40 x 80         | 8.68                              | 9.98   | 0.013            | 0.012 | ECET1EA823FA          |
|                                     | 50 x 50         | 9.20                              | 10.58  | 0.016            | 0.015 | ECEP1EA823HA          |
| 100000                              | 40 x 105        | 9.76                              | 11.22  | 0.012            | 0.010 | ECET1EA104FA          |
|                                     | 50 x 63         | 10.02                             | 11.52  | 0.015            | 0.013 | ECEP1EA104HA          |
| 120000                              | 50 x 80         | 10.93                             | 12.57  | 0.013            | 0.012 | ECEP1EA124HA          |
| 150000                              | 50 x 92         | 11.70                             | 13.46  | 0.012            | 0.011 | ECEP1EA154HA          |
| 180000                              | 50 x 105        | 12.42                             | 14.28  | 0.010            | 0.009 | ECEP1EA184HA          |
| <b>50 VDC Working, 63 VDC Surge</b> |                 |                                   |        |                  |       |                       |
| 10000                               | 35 x 40         | 4.00                              | 4.60   | 0.033            | 0.025 | ECET1HA103EA          |
| 15000                               | 35 x 50         | 4.80                              | 5.52   | 0.022            | 0.018 | ECET1HA153EA          |
|                                     | 40 x 40         | 4.80                              | 5.52   | 0.022            | 0.018 | ECET1HA153FA          |
| 18000                               | 35 x 63         | 5.27                              | 6.06   | 0.020            | 0.016 | ECET1HA183EA          |
| 22000                               | 40 x 50         | 5.15                              | 5.92   | 0.016            | 0.013 | ECET1HA223FA          |
| 27000                               | 35 x 80         | 6.16                              | 7.08   | 0.015            | 0.012 | ECET1HA273EA          |
|                                     | 40 x 63         | 6.05                              | 6.96   | 0.015            | 0.012 | ECET1HA273FA          |
| 33000                               | 35 x 105        | 7.23                              | 8.31   | 0.013            | 0.010 | ECET1HA333EA          |
|                                     | 50 x 50         | 7.75                              | 8.91   | 0.018            | 0.014 | ECEP1HA333HA          |
| 39000                               | 40 x 80         | 7.55                              | 8.68   | 0.014            | 0.011 | ECET1HA393FA          |
|                                     | 50 x 63         | 8.40                              | 9.66   | 0.016            | 0.013 | ECEP1HA393HA          |
| 47000                               | 40 x 105        | 8.18                              | 9.41   | 0.012            | 0.010 | ECET1HA473FA          |
|                                     | 50 x 80         | 9.19                              | 10.57  | 0.014            | 0.011 | ECEP1HA473HA          |
| 56000                               | 50 x 92         | 9.79                              | 11.26  | 0.012            | 0.009 | ECEP1HA563HA          |
| 68000                               | 50 x 105        | 10.42                             | 11.98  | 0.011            | 0.009 | ECEP1HA683HA          |

## T-HA Standard Ratings (continued)

| Cap.<br>(μF)                               | Size (mm)<br>D x L | Max 105°C R.C. (A <sub>rms</sub> ) |        | Max 20°C ESR (Ω) |       | Panasonic<br>Part Number |
|--------------------------------------------|--------------------|------------------------------------|--------|------------------|-------|--------------------------|
|                                            |                    | 120 Hz                             | 10kHz~ | 120Hz            | 20kHz |                          |
| 63 VDC Working, 79 VDC Surge               |                    |                                    |        |                  |       |                          |
| 6800                                       | 35 x 40            | 3.60                               | 4.14   | 0.049            | 0.037 | ECET1JA682EA             |
| 12000                                      | 35 x 50            | 4.40                               | 5.06   | 0.028            | 0.023 | ECET1JA123EA             |
|                                            | 40 x 40            | 4.52                               | 5.20   | 0.030            | 0.026 | ECET1JA123FA             |
| 15000                                      | 35 x 63            | 4.92                               | 5.66   | 0.024            | 0.021 | ECET1JA153EA             |
|                                            | 40 x 50            | 4.80                               | 5.52   | 0.027            | 0.023 | ECET1JA153FA             |
| 18000                                      | 35 x 80            | 5.79                               | 6.66   | 0.022            | 0.019 | ECET1JA183EA             |
|                                            | 40 x 63            | 5.39                               | 6.20   | 0.023            | 0.020 | ECET1JA183FA             |
| 22000                                      | 50 x 50            | 6.76                               | 7.77   | 0.019            | 0.016 | ECEP1JA223HA             |
| 27000                                      | 35 x 105           | 6.53                               | 7.51   | 0.017            | 0.014 | ECET1JA273EA             |
|                                            | 40 x 80            | 6.59                               | 7.58   | 0.017            | 0.014 | ECET1JA273FA             |
|                                            | 50 x 63            | 7.34                               | 8.44   | 0.017            | 0.014 | ECEP1JA273HA             |
| 33000                                      | 50 x 80            | 8.00                               | 9.20   | 0.015            | 0.013 | ECEP1JA333HA             |
| 39000                                      | 40 x 105           | 7.53                               | 8.66   | 0.014            | 0.012 | ECET1JA393FA             |
|                                            | 50 x 92            | 8.48                               | 9.75   | 0.014            | 0.012 | ECEP1JA393HA             |
| 47000                                      | 50 x 105           | 8.99                               | 10.34  | 0.012            | 0.010 | ECEP1JA473HA             |
| 80 VDC Working, 100 VDC Surge              |                    |                                    |        |                  |       |                          |
| 4700                                       | 35 x 40            | 3.30                               | 3.80   | 0.049            | 0.037 | ECET1KA472EA             |
| 6800                                       | 35 x 50            | 3.90                               | 4.49   | 0.041            | 0.031 | ECET1KA682EA             |
|                                            | 40 x 40            | 3.90                               | 4.49   | 0.041            | 0.031 | ECET1KA682FA             |
| 8200                                       | 35 x 63            | 4.39                               | 5.05   | 0.036            | 0.027 | ECET1KA822EA             |
|                                            | 40 x 50            | 4.29                               | 4.93   | 0.036            | 0.027 | ECET1KA822FA             |
| 10000                                      | 35 x 80            | 4.88                               | 5.61   | 0.031            | 0.024 | ECET1KA103EA             |
|                                            | 40 x 63            | 4.73                               | 5.44   | 0.033            | 0.025 | ECET1KA103FA             |
| 12000                                      | 50 x 50            | 6.03                               | 6.93   | 0.035            | 0.026 | ECEP1KA123HA             |
| 15000                                      | 35 x 105           | 6.13                               | 7.05   | 0.024            | 0.018 | ECET1KA153EA             |
|                                            | 40 x 80            | 5.97                               | 6.87   | 0.025            | 0.019 | ECET1KA153FA             |
|                                            | 50 x 63            | 6.65                               | 7.65   | 0.028            | 0.021 | ECEP1KA153HA             |
| 18000                                      | 50 x 80            | 7.29                               | 8.38   | 0.026            | 0.019 | ECEP1KA183HA             |
| 22000                                      | 40 x 105           | 6.95                               | 7.99   | 0.019            | 0.014 | ECET1KA223FA             |
|                                            | 50 x 92            | 7.83                               | 9.00   | 0.022            | 0.016 | ECEP1KA223HA             |
| 27000                                      | 50 x 105           | 8.38                               | 9.64   | 0.018            | 0.014 | ECEP1KA273HA             |
| 100 VDC Working, 125 VDC Surge             |                    |                                    |        |                  |       |                          |
| 3300                                       | 35 x 40            | 3.20                               | 3.68   | 0.075            | 0.053 | ECET2AA332EA             |
| 4700                                       | 35 x 50            | 3.80                               | 4.37   | 0.053            | 0.040 | ECET2AA472EA             |
|                                            | 40 x 40            | 3.80                               | 4.37   | 0.053            | 0.040 | ECET2AA472FA             |
| 5600                                       | 35 x 63            | 4.06                               | 4.67   | 0.044            | 0.033 | ECET2AA562EA             |
| 6800                                       | 40 x 50            | 4.57                               | 5.26   | 0.037            | 0.027 | ECET2AA682FA             |
| 8200                                       | 35 x 80            | 5.15                               | 5.92   | 0.030            | 0.023 | ECET2AA822EA             |
|                                            | 40 x 63            | 5.02                               | 5.77   | 0.030            | 0.023 | ECET2AA822FA             |
|                                            | 50 x 50            | 6.14                               | 7.06   | 0.030            | 0.023 | ECEP2AA822HA             |
| 10000                                      | 35 x 105           | 6.38                               | 7.34   | 0.025            | 0.019 | ECET2AA103EA             |
| 12000                                      | 40 x 80            | 6.44                               | 7.41   | 0.021            | 0.016 | ECET2AA123FA             |
|                                            | 50 x 63            | 7.17                               | 8.25   | 0.022            | 0.017 | ECEP2AA123HA             |
| 15000                                      | 40 x 105           | 7.37                               | 8.48   | 0.017            | 0.012 | ECET2AA153FA             |
|                                            | 50 x 80            | 8.01                               | 9.21   | 0.019            | 0.014 | ECEP2AA153HA             |
| 18000                                      | 50 x 92            | 8.64                               | 9.94   | 0.017            | 0.012 | ECEP2AA183HA             |
| 22000                                      | 50 x 105           | 9.32                               | 10.72  | 0.015            | 0.011 | ECEP2AA223HA             |
| 200 VDC Working, 250 VDC Surge             |                    |                                    |        |                  |       |                          |
| 1200                                       | 35 x 40            | 2.50                               | 3.50   | 0.133            | 0.066 | ECET2DA122EA             |
| 1800                                       | 40 x 40            | 2.70                               | 3.78   | 0.129            | 0.077 | ECET2DA182FA             |
| 2200                                       | 35 x 50            | 2.90                               | 4.06   | 0.098            | 0.059 | ECET2DA222EA             |
| 2700                                       | 35 x 63            | 3.65                               | 5.11   | 0.080            | 0.048 | ECET2DA272EA             |
|                                            | 40 x 50            | 3.55                               | 4.97   | 0.086            | 0.052 | ECET2DA272FA             |
| 3300                                       | 35 x 80            | 4.52                               | 6.33   | 0.065            | 0.039 | ECET2DA332EA             |
|                                            | 40 x 63            | 4.40                               | 6.16   | 0.070            | 0.042 | ECET2DA332FA             |
|                                            | 50 x 50            | 5.20                               | 7.28   | 0.075            | 0.045 | ECEP2DA332HA             |
| 3900                                       | 50 x 50            | 5.65                               | 7.91   | 0.064            | 0.038 | ECEP2DA392HX             |
|                                            | 50 x 63            | 5.90                               | 8.26   | 0.064            | 0.038 | ECEP2DA392HA             |
| 4700                                       | 35 x 105           | 5.70                               | 7.98   | 0.046            | 0.028 | ECET2DA472EA             |
|                                            | 40 x 80            | 5.76                               | 8.06   | 0.049            | 0.030 | ECET2DA472FA             |
|                                            | 50 x 63            | 6.48                               | 9.07   | 0.053            | 0.032 | ECEP2DA472HX             |
|                                            | 50 x 80            | 6.82                               | 9.55   | 0.053            | 0.032 | ECEP2DA472HA             |
| 5600                                       | 40 x 105           | 6.76                               | 9.46   | 0.041            | 0.025 | ECET2DA562FA             |
|                                            | 50 x 92            | 7.68                               | 10.75  | 0.044            | 0.027 | ECEP2DA562HA             |
| 6800                                       | 50 x 92            | 8.46                               | 11.84  | 0.034            | 0.020 | ECEP2DA682HX             |
|                                            | 50 x 105           | 8.71                               | 12.19  | 0.034            | 0.020 | ECEP2DA682HA             |
| 8200                                       | 50 x 105           | 9.56                               | 13.38  | 0.028            | 0.016 | ECEP2DA822HA             |
| 250 VDC Working, 300 VDC Surge             |                    |                                    |        |                  |       |                          |
| 820                                        | 35 x 40            | 2.20                               | 3.08   | 0.243            | 0.133 | ECET2EA821EA             |
| 1200                                       | 35 x 50            | 2.30                               | 3.22   | 0.180            | 0.117 | ECET2EA122EA             |
|                                            | 40 x 40            | 2.66                               | 3.72   | 0.180            | 0.117 | ECET2EA122FA             |
| 1500                                       | 35 x 63            | 2.57                               | 3.60   | 0.144            | 0.093 | ECET2EA152EA             |
| 1800                                       | 40 x 50            | 3.15                               | 4.41   | 0.120            | 0.078 | ECET2EA182FA             |
| 2200                                       | 35 x 80            | 3.75                               | 5.25   | 0.098            | 0.064 | ECET2EA222EA             |
| 250 VDC Working, 300 VDC Surge (continued) |                    |                                    |        |                  |       |                          |
| 2200                                       | 40 x 63            | 3.68                               | 5.15   | 0.098            | 0.064 | ECET2EA222FA             |
|                                            | 50 x 50            | 4.35                               | 6.09   | 0.098            | 0.064 | ECEP2EA222HA             |
| 2700                                       | 35 x 105           | 4.80                               | 6.72   | 0.080            | 0.052 | ECET2EA272EA             |
|                                            | 50 x 50            | 4.80                               | 6.72   | 0.080            | 0.052 | ECEP2EA272HX             |
|                                            | 50 x 63            | 4.98                               | 6.97   | 0.080            | 0.052 | ECEP2EA272HA             |
| 3300                                       | 35 x 105           | 4.86                               | 6.80   | 0.065            | 0.042 | ECET2EA332EA             |
|                                            | 40 x 80            | 4.86                               | 6.80   | 0.065            | 0.042 | ECET2EA332FA             |
|                                            | 50 x 63            | 5.48                               | 7.67   | 0.065            | 0.042 | ECEP2EA332HA             |
| 3900                                       | 40 x 105           | 5.61                               | 7.85   | 0.055            | 0.036 | ECET2EA392FA             |
|                                            | 50 x 80            | 6.10                               | 8.54   | 0.055            | 0.036 | ECEP2EA392HA             |
| 4300                                       | 50 x 92            | 6.67                               | 9.34   | 0.050            | 0.033 | ECEP2EA432HA             |
| 4700                                       | 50 x 92            | 6.93                               | 9.70   | 0.046            | 0.030 | ECEP2EA472HX             |
|                                            | 50 x 105           | 7.03                               | 9.84   | 0.046            | 0.030 | ECEP2EA472HA             |
| 5600                                       | 50 x 105           | 7.67                               | 10.74  | 0.039            | 0.025 | ECEP2EA562HA             |
| 350 VDC Working, 400 VDC Surge             |                    |                                    |        |                  |       |                          |
| 470                                        | 35 x 40            | 2.00                               | 2.80   | 0.459            | 0.183 | ECET2VA471EA             |
| 680                                        | 35 x 50            | 2.15                               | 3.01   | 0.317            | 0.127 | ECET2VA681EA             |
|                                            | 40 x 40            | 2.30                               | 3.22   | 0.317            | 0.127 | ECET2VA681FA             |
| 820                                        | 35 x 63            | 2.65                               | 3.71   | 0.263            | 0.105 | ECET2VA821EA             |
|                                            | 40 x 50            | 2.65                               | 3.71   | 0.263            | 0.105 | ECET2VA821FA             |
| 1000                                       | 50 x 50            | 3.56                               | 4.98   | 0.216            | 0.086 | ECEP2VA102HA             |
| 1200                                       | 35 x 80            | 3.22                               | 4.51   | 0.180            | 0.072 | ECET2VA122EA             |
|                                            | 40 x 63            | 3.22                               | 4.51   | 0.180            | 0.072 | ECET2VA122FA             |
| 1500                                       | 35 x 105           | 4.78                               | 6.69   | 0.144            | 0.057 | ECET2VA152EA             |
|                                            | 40 x 80            | 3.75                               | 5.25   | 0.144            | 0.057 | ECET2VA152FA             |
|                                            | 50 x 63            | 4.16                               | 5.82   | 0.144            | 0.057 | ECEP2VA152HA             |
| 1800                                       | 40 x 105           | 5.23                               | 7.32   | 0.120            | 0.048 | ECET2VA182FA             |
|                                            | 50 x 80            | 5.69                               | 7.97   | 0.120            | 0.048 | ECEP2VA182HA             |
| 2000                                       | 50 x 92            | 6.34                               | 8.88   | 0.108            | 0.043 | ECEP2VA202HA             |
| 2200                                       | 50 x 105           | 7.03                               | 9.84   | 0.098            | 0.039 | ECEP2VA222HA             |
| 400 VDC Working, 450 VDC Surge             |                    |                                    |        |                  |       |                          |
| 390                                        | 35 x 45            | 1.55                               | 2.17   | 0.425            | 0.170 | ECET2GA391EA             |
| 470                                        | 40 x 40            | 1.75                               | 2.45   | 0.353            | 0.141 | ECET2GA471FA             |
| 560                                        | 35 x 50            | 1.80                               | 2.52   | 0.296            | 0.118 | ECET2GA561EA             |
| 680                                        | 40 x 50            | 2.17                               | 3.04   | 0.244            | 0.098 | ECET2GA681FA             |
| 820                                        | 35 x 63            | 2.44                               | 3.42   | 0.202            | 0.081 | ECET2GA821EA             |
|                                            | 40 x 50            | 2.58                               | 3.61   | 0.202            | 0.081 | ECET2GA821FA             |
|                                            | 50 x 50            | 3.15                               | 4.41   | 0.202            | 0.081 | ECEP2GA821HA             |
| 1000                                       | 35 x 80            | 3.00                               | 4.20   | 0.166            | 0.066 | ECET2GA102EA             |
|                                            | 40 x 63            | 3.00                               | 4.20   | 0.166            | 0.066 | ECET2GA102FA             |
|                                            | 50 x 50            | 3.45                               | 4.83   | 0.166            | 0.066 | ECEP2GA102HA             |
| 1200                                       | 35 x 105           | 3.75                               | 5.25   | 0.138            | 0.055 | ECET2GA122EA             |
|                                            | 40 x 80            | 3.79                               | 5.31   | 0.138            | 0.055 | ECET2GA122FA             |
|                                            | 50 x 63            | 4.22                               | 5.91   | 0.152            | 0.061 | ECEP2GA122HA             |
| 1500                                       | 40 x 105           | 4.81                               | 6.73   | 0.111            | 0.044 | ECET2GA152FA             |
|                                            | 50 x 80            | 5.22                               | 7.31   | 0.122            | 0.049 | ECEP2GA152HA             |
| 1600                                       | 50 x 92            | 5.69                               | 7.97   | 0.114            | 0.046 | ECEP2GA162HA             |
| 1800                                       | 40 x 105           | 5.06                               | 7.08   | 0.101            | 0.041 | ECET2GA182FA             |
|                                            | 50 x 80            | 5.50                               | 7.70   | 0.101            | 0.041 | ECEP2GA182HX             |
|                                            | 50 x 105           | 6.48                               | 9.07   | 0.101            | 0.041 | ECEP2GA182HA             |
| 2200                                       | 50 x 92            | 6.55                               | 9.17   | 0.082            | 0.033 | ECEP2GA222HA             |
| 450 VDC Working, 500 VDC Surge             |                    |                                    |        |                  |       |                          |
| 330                                        | 35 x 40            | 1.37                               | 1.92   | 0.502            | 0.176 | ECET2WA331EA             |
| 470                                        | 35 x 50            | 1.74                               | 2.44   | 0.353            | 0.123 | ECET2WA471EA             |
|                                            | 40 x 40            | 1.68                               | 2.35   | 0.353            | 0.123 | ECET2WA471FA             |
| 560                                        | 35 x 63            | 2.15                               | 3.01   | 0.296            | 0.104 | ECET2WA561EA             |
|                                            | 40 x 50            | 2.10                               | 2.94   | 0.296            | 0.104 | ECET2WA561FA             |
| 680                                        | 40 x 63            | 2.50                               | 3.50   | 0.244            | 0.085 | ECET2WA681FA             |
|                                            | 50 x 50            | 2.90                               | 4.06   | 0.244            | 0.085 | ECEP2WA681HA             |
| 820                                        | 35 x 80            | 2.70                               | 3.78   | 0.202            | 0.071 | ECET2WA821EA             |
|                                            | 50 x 50            | 3.42                               | 4.79   | 0.222            | 0.079 | ECEP2WA821HX             |
|                                            | 50 x 63            | 3.42                               | 4.79   | 0.222            | 0.078 | ECEP2WA821HA             |
| 1000                                       | 35 x 105           | 3.47                               | 4.86   | 0.166            | 0.058 | ECET2WA102EA             |
|                                            | 40 x 80            | 3.50                               | 4.90   | 0.166            | 0.058 | ECET2WA102FA             |
|                                            | 50 x 63            | 3.74                               | 5.24   | 0.172            | 0.065 | ECEP2WA102HA             |
| 1200                                       | 40 x 105           | 4.33                               | 6.06   | 0.138            | 0.048 | ECET2WA122FA             |
|                                            | 50 x 80            | 4.70                               | 6.58   | 0.152            | 0.053 | ECEP2WA122HA             |
| 1300                                       | 50 x 92            | 5.18                               | 7.25   | 0.140            | 0.049 | ECEP2WA132HA             |
| 1500                                       | 50 x 105           | 6.03                               | 8.44   | 0.122            | 0.043 | ECEP2WA152HA             |
| 1800                                       | 50 x 105           | 6.23                               | 8.72   | 0.101            | 0.036 | ECEP2WA182HA             |