

Series 1306 Polyester and Foil

Features: Flame retardant to UL94, cost effective, moderate temperature choice, small size, dv/dt ratings in excess of 1000 V/us.

Applications: Recommended for DC applications where blocking capacitance stability is not a critical factor, medical electronics, telecommunications.

Packaging: Axial wrap and fill (TF,TC), radial lead box (EFR, DFR), axial lead epoxy tube (EC).

Specifications

1) Temperature Range

-55°C to 85°C at rated voltage to 125°C with 50% voltage derating.

2) Capacitance

0.001µf to 10µF

3) Dielectric Strength

At 25°C, 200% of rated voltage when applied terminal to terminal for one minute through a current limiting resistance.

4) Insulation Resistance

At 25°C after 2 minutes charge time at rated voltage or 500 VDC, whichever is less, the minimum IR shall be 50,000 Megohm-Microfarads, but need not exceed 100,000 Megohms.

5) Humidity Resistance

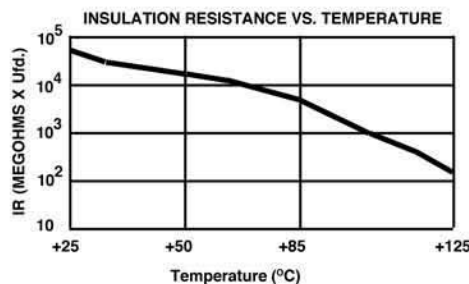
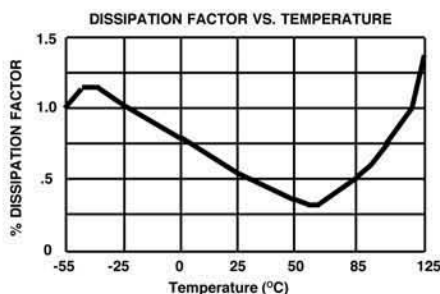
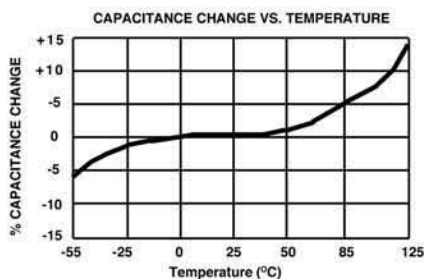
Series 1306 shall meet the requirements of MIL-STD. 202, Method 103B.

6) Dissipation Factor

Shall be 0.6% max. when measured at 1 KHz and 25°C.

7) Life Test

Will withstand the application of 140% rated voltage at + 85°C for 250 hours with not more than one failure in 12 permitted.



Typical Temperature Curves Polyester and Foil

Catalog Nomenclature

*** 1 3 0 6 E F R - 3 - . 0 0 1 - 1 - 5**

Case Code:

- TC - Wrap & Fill - Round - Axial
- TF - Wrap & Fill - Flat - Axial
- EC - Epoxy Case - Round - Axial
- EFR - Epoxy Case - Flat - Radial
- DFR - Dipped Construction - Flat - Radial
- HS - Hermetically Sealed

Dielectric Code:

- 1206 - Polypropylene/Foil
- 1213 - Metallized Polypropylene
- 1306 - Polyester/Foil
- 1313 - Metallized Polyester
- 1613 - Metallized Polycarbonate
- 1906 - Polystyrene/Foil
- 2113 - Metallized Polyphenylene Sulfide

Size Code:

- 3 - Standard
- 2 - Miniature (1313DFR Series Only)
- X - Non-standard
- Or one letter case code

Capacitance:

In microfarads (μ F)

Voltage:

- .35 - 35 VDC
- 0 - 50 VDC
- 1 - 100 VDC
- 2 - 200 VDC
- 3 - 300 VDC
- 4 - 400 VDC
- 10 - 1000 VDC
- 1.6K - 1600VDC
- Etc.

Tolerance:

- 1 - 1%
- 2 - 2%
- 5 - 5%
- Etc.

*** Options**

The following options are available from EFC by specifying the appropriate prefix.

- A - Aluminum foil electrodes
- T - Tin foil electrodes
- HV - High voltage DC applications
- AC - AC voltage rated applications
- MF - Metallized and foil hybrid for maximum pulse current applications
- M - Dual metallized design for pulse current applications
- SP - Low ESR, high RMS current applications
- PC - Direct mount terminals for high current filter applications
- FT - Feed thru filter applications
- RC - Resistor capacitor suppressors

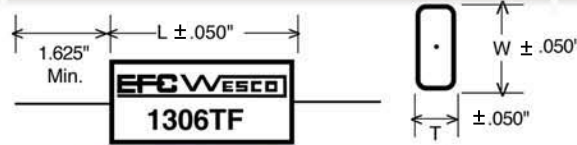


Please consult factory for special requirements, including non-standard values and sizes

1306TF Oval Wrap & Fill

Polyester and Foil Capacitors

Lead Spec.
Tinned Copperweld
Under .190T = 24 AWG
.190 - .380T = 22AWG
Above .380T = 20 AWG



Dimensions and Ratings

| Cap. | | 50 VDC | | | |
|-------|--------------------|--------|------|-------|--|
| µF | Part # | T | W | L | |
| .001 | 1306TF-3-.001-0-* | .120 | .210 | .406 | |
| .0012 | 1306TF-3-.0012-0-* | .120 | .210 | .406 | |
| .0015 | 1306TF-3-.0015-0-* | .120 | .210 | .406 | |
| .0022 | 1306TF-3-.0022-0-* | .120 | .210 | .406 | |
| .0027 | 1306TF-3-.0027-0-* | .120 | .210 | .406 | |
| .0039 | 1306TF-3-.0039-0-* | .120 | .210 | .406 | |
| .0047 | 1306TF-3-.0047-0-* | .120 | .210 | .406 | |
| .0056 | 1306TF-3-.0056-0-* | .120 | .210 | .406 | |
| .0068 | 1306TF-3-.0068-0-* | .120 | .210 | .406 | |
| .0082 | 1306TF-3-.0082-0-* | .120 | .210 | .406 | |
| .01 | 1306TF-3-.01-0-* | .120 | .210 | .406 | |
| .012 | 1306TF-3-.012-0-* | .120 | .210 | .406 | |
| .015 | 1306TF-3-.015-0-* | .120 | .220 | .406 | |
| .018 | 1306TF-3-.018-0-* | .140 | .230 | .406 | |
| .022 | 1306TF-3-.022-0-* | .150 | .240 | .406 | |
| .027 | 1306TF-3-.027-0-* | .170 | .270 | .406 | |
| .033 | 1306TF-3-.033-0-* | .120 | .210 | .531 | |
| .039 | 1306TF-3-.039-0-* | .130 | .220 | .531 | |
| .047 | 1306TF-3-.047-0-* | .140 | .240 | .531 | |
| .056 | 1306TF-3-.056-0-* | .160 | .250 | .531 | |
| .068 | 1306TF-3-.068-0-* | .180 | .270 | .531 | |
| .082 | 1306TF-3-.082-0-* | .200 | .300 | .531 | |
| .1 | 1306TF-3-.1-0-* | .230 | .320 | .531 | |
| .12 | 1306TF-3-.12-0-* | .190 | .290 | .656 | |
| .15 | 1306TF-3-.15-0-* | .220 | .310 | .656 | |
| .18 | 1306TF-3-.18-0-* | .250 | .340 | .656 | |
| .22 | 1306TF-3-.22-0-* | .280 | .370 | .656 | |
| .27 | 1306TF-3-.27-0-* | .310 | .410 | .656 | |
| .33 | 1306TF-3-.33-0-* | .280 | .400 | .781 | |
| .39 | 1306TF-3-.39-0-* | .310 | .430 | .781 | |
| .47 | 1306TF-3-.47-0-* | .340 | .470 | 1.190 | |
| .56 | 1306TF-3-.56-0-* | .330 | .460 | 1.190 | |
| .68 | 1306TF-3-.68-0-* | .370 | .500 | 1.190 | |
| .82 | 1306TF-3-.82-0-* | .410 | .540 | 1.190 | |
| 1.0 | 1306TF-3-1.0-0-* | .360 | .520 | 1.190 | |
| 1.25 | 1306TF-3-1.25-0-* | .410 | .580 | 1.190 | |
| 1.5 | 1306TF-3-1.5-0-* | .460 | .620 | 1.190 | |
| 2.0 | 1306TF-3-2.0-0-* | .540 | .710 | 1.190 | |

| Cap. | | 100 VDC | | | |
|-------|--------------------|---------|-------|-------|--|
| µF | Part # | T | W | L | |
| .001 | 1306TF-3-.001-1-* | .120 | .210 | .406 | |
| .0012 | 1306TF-3-.0012-1-* | .120 | .210 | .406 | |
| .0015 | 1306TF-3-.0015-1-* | .120 | .210 | .406 | |
| .0022 | 1306TF-3-.0022-1-* | .120 | .210 | .406 | |
| .0027 | 1306TF-3-.0027-1-* | .120 | .210 | .406 | |
| .0039 | 1306TF-3-.0039-1-* | .120 | .210 | .406 | |
| .0047 | 1306TF-3-.0047-1-* | .120 | .210 | .406 | |
| .0056 | 1306TF-3-.0056-1-* | .120 | .210 | .406 | |
| .0068 | 1306TF-3-.0068-1-* | .120 | .210 | .406 | |
| .0082 | 1306TF-3-.0082-1-* | .120 | .210 | .406 | |
| .01 | 1306TF-3-.01-1-* | .120 | .220 | .406 | |
| .012 | 1306TF-3-.012-1-* | .140 | .230 | .406 | |
| .015 | 1306TF-3-.015-1-* | .160 | .250 | .406 | |
| .018 | 1306TF-3-.018-1-* | .180 | .270 | .406 | |
| .022 | 1306TF-3-.022-1-* | .120 | .210 | .531 | |
| .027 | 1306TF-3-.027-1-* | .140 | .230 | .531 | |
| .033 | 1306TF-3-.033-1-* | .150 | .250 | .531 | |
| .039 | 1306TF-3-.039-1-* | .170 | .270 | .531 | |
| .047 | 1306TF-3-.047-1-* | .190 | .290 | .531 | |
| .056 | 1306TF-3-.056-1-* | .210 | .310 | .531 | |
| .068 | 1306TF-3-.068-1-* | .180 | .280 | .656 | |
| .082 | 1306TF-3-.082-1-* | .210 | .300 | .656 | |
| .1 | 1306TF-3-.1-1-* | .230 | .330 | .656 | |
| .12 | 1306TF-3-.12-1-* | .260 | .350 | .656 | |
| .15 | 1306TF-3-.15-1-* | .290 | .390 | .656 | |
| .18 | 1306TF-3-.18-1-* | .330 | .420 | .656 | |
| .22 | 1306TF-3-.22-1-* | .290 | .420 | .781 | |
| .27 | 1306TF-3-.27-1-* | .330 | .450 | .781 | |
| .33 | 1306TF-3-.33-1-* | .320 | .450 | .906 | |
| .39 | 1306TF-3-.39-1-* | .360 | .480 | .906 | |
| .47 | 1306TF-3-.47-1-* | .400 | .520 | .906 | |
| .56 | 1306TF-3-.56-1-* | .340 | .500 | 1.190 | |
| .68 | 1306TF-3-.68-1-* | .380 | .550 | 1.190 | |
| .82 | 1306TF-3-.82-1-* | .430 | .590 | 1.190 | |
| 1.0 | 1306TF-3-1.0-1-* | .480 | .640 | 1.190 | |
| 1.25 | 1306TF-3-1.25-1-* | .540 | .710 | 1.190 | |
| 1.5 | 1306TF-3-1.5-1-* | .520 | .690 | 1.440 | |
| 2.0 | 1306TF-3-2.0-1-* | .610 | .780 | 1.440 | |
| 3.0 | 1306TF-3-3.0-1-* | .670 | .870 | 1.690 | |
| 4.0 | 1306TF-3-4.0-1-* | .790 | .990 | 1.690 | |
| 5.0 | 1306TF-3-5.0-1-* | .900 | 1.090 | 1.690 | |

| Cap. | | 160 VDC | | | |
|-------|----------------------|---------|-------|-------|--|
| µF | Part # | T | W | L | |
| .001 | 1306TF-3-.001-1.6-* | .120 | .210 | .406 | |
| .0012 | 1306TF-3-.0012-1.6-* | .120 | .210 | .406 | |
| .0015 | 1306TF-3-.0015-1.6-* | .120 | .210 | .406 | |
| .0022 | 1306TF-3-.0022-1.6-* | .120 | .210 | .406 | |
| .0027 | 1306TF-3-.0027-1.6-* | .120 | .210 | .406 | |
| .0039 | 1306TF-3-.0039-1.6-* | .120 | .210 | .406 | |
| .0047 | 1306TF-3-.0047-1.6-* | .120 | .210 | .406 | |
| .0056 | 1306TF-3-.0056-1.6-* | .120 | .210 | .406 | |
| .0068 | 1306TF-3-.0068-1.6-* | .120 | .210 | .406 | |
| .0082 | 1306TF-3-.0082-1.6-* | .130 | .220 | .406 | |
| .01 | 1306TF-3-.01-1.6-* | .150 | .240 | .406 | |
| .012 | 1306TF-3-.012-1.6-* | .160 | .260 | .406 | |
| .015 | 1306TF-3-.015-1.6-* | .110 | .200 | .531 | |
| .018 | 1306TF-3-.018-1.6-* | .120 | .220 | .531 | |
| .022 | 1306TF-3-.022-1.6-* | .140 | .240 | .531 | |
| .027 | 1306TF-3-.027-1.6-* | .160 | .260 | .531 | |
| .033 | 1306TF-3-.033-1.6-* | .180 | .280 | .531 | |
| .039 | 1306TF-3-.039-1.6-* | .200 | .300 | .531 | |
| .047 | 1306TF-3-.047-1.6-* | .230 | .320 | .531 | |
| .056 | 1306TF-3-.056-1.6-* | .190 | .290 | .656 | |
| .068 | 1306TF-3-.068-1.6-* | .220 | .310 | .656 | |
| .082 | 1306TF-3-.082-1.6-* | .240 | .340 | .656 | |
| .1 | 1306TF-3-.1-1.6-* | .270 | .360 | .656 | |
| .12 | 1306TF-3-.12-1.6-* | .300 | .400 | .656 | |
| .15 | 1306TF-3-.15-1.6-* | .270 | .400 | .781 | |
| .18 | 1306TF-3-.18-1.6-* | .300 | .430 | .781 | |
| .22 | 1306TF-3-.22-1.6-* | .340 | .470 | .781 | |
| .27 | 1306TF-3-.27-1.6-* | .330 | .460 | .906 | |
| .33 | 1306TF-3-.33-1.6-* | .380 | .500 | .906 | |
| .39 | 1306TF-3-.39-1.6-* | .420 | .540 | .906 | |
| .47 | 1306TF-3-.47-1.6-* | .360 | .520 | 1.190 | |
| .56 | 1306TF-3-.56-1.6-* | .400 | .560 | 1.190 | |
| .68 | 1306TF-3-.68-1.6-* | .450 | .610 | 1.190 | |
| .82 | 1306TF-3-.82-1.6-* | .500 | .660 | 1.190 | |
| 1.0 | 1306TF-3-1.0-1.6-* | .560 | .730 | 1.190 | |
| 1.25 | 1306TF-3-1.25-1.6-* | .550 | .710 | 1.440 | |
| 1.5 | 1306TF-3-1.5-1.6-* | .610 | .770 | 1.440 | |
| 2.0 | 1306TF-3-2.0-1.6-* | .620 | .820 | 1.690 | |
| 3.0 | 1306TF-3-3.0-1.6-* | .780 | .980 | 1.690 | |
| 4.0 | 1306TF-3-4.0-1.6-* | .920 | 1.120 | 1.690 | |
| 5.0 | 1306TF-3-5.0-1.6-* | .950 | 1.140 | 1.940 | |
| 6.0 | 1306TF-3-6.0-1.6-* | 1.050 | 1.250 | 1.940 | |
| 8.0 | 1306TF-3-8.0-1.6-* | 1.130 | 1.330 | 2.250 | |

* - Please insert appropriate tolerance code

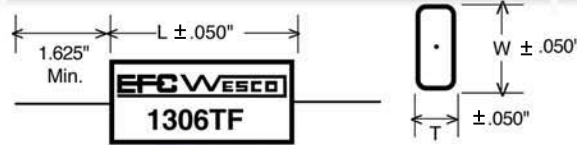


Please consult factory for special requirements, including non-standard values and sizes

1306TF Oval Wrap & Fill

Polyester and Foil Capacitors

Lead Spec.
Tinned Copperweld
Under .190T = 24 AWG
.190 - .380T = 22AWG
Above .380T = 20 AWG



Dimensions and Ratings

| 200 VDC | | | | | 400 VDC | | | | | 600 VDC | | | | |
|---------|-------------------|------|-------|-------|---------|-------------------|-------|-------|-------|---------|-------------------|-------|-------|-------|
| Cap. | Part # | T | W | L | Cap. | Part # | T | W | L | Cap. | Part # | T | W | L |
| .001 | 1306TF-3-001-2-* | .120 | .210 | .406 | .001 | 1306TF-3-001-4-* | .120 | .210 | .406 | .001 | 1306TF-3-001-6-* | .120 | .210 | .531 |
| .0012 | 1306TF-3-0012-2-* | .120 | .210 | .406 | .0012 | 1306TF-3-0012-4-* | .120 | .210 | .406 | .0012 | 1306TF-3-0012-6-* | .120 | .210 | .531 |
| .0015 | 1306TF-3-0015-2-* | .120 | .210 | .406 | .0015 | 1306TF-3-0015-4-* | .120 | .210 | .406 | .0015 | 1306TF-3-0015-6-* | .120 | .210 | .531 |
| .0022 | 1306TF-3-0022-2-* | .120 | .210 | .406 | .0022 | 1306TF-3-0022-4-* | .140 | .240 | .406 | .0022 | 1306TF-3-0022-6-* | .130 | .220 | .531 |
| .0027 | 1306TF-3-0027-2-* | .120 | .210 | .406 | .0027 | 1306TF-3-0027-4-* | .160 | .260 | .406 | .0027 | 1306TF-3-0027-6-* | .140 | .240 | .531 |
| .0039 | 1306TF-3-0039-2-* | .120 | .210 | .406 | .0039 | 1306TF-3-0039-4-* | .200 | .300 | .406 | .0039 | 1306TF-3-0039-6-* | .180 | .270 | .531 |
| .0047 | 1306TF-3-0047-2-* | .120 | .210 | .406 | .0047 | 1306TF-3-0047-4-* | .120 | .210 | .531 | .0047 | 1306TF-3-0047-6-* | .200 | .300 | .531 |
| .0056 | 1306TF-3-0056-2-* | .130 | .230 | .406 | .0056 | 1306TF-3-0056-4-* | .130 | .220 | .531 | .0056 | 1306TF-3-0056-6-* | .220 | .320 | .531 |
| .0068 | 1306TF-3-0068-2-* | .150 | .250 | .406 | .0068 | 1306TF-3-0068-4-* | .140 | .240 | .531 | .0068 | 1306TF-3-0068-6-* | .170 | .260 | .656 |
| .0082 | 1306TF-3-0082-2-* | .170 | .260 | .406 | .0082 | 1306TF-3-0082-4-* | .150 | .260 | .531 | .0082 | 1306TF-3-0082-6-* | .190 | .280 | .656 |
| .01 | 1306TF-3-01-2-* | .190 | .280 | .406 | .01 | 1306TF-3-01-4-* | .180 | .280 | .531 | .01 | 1306TF-3-01-6-* | .210 | .300 | .656 |
| .012 | 1306TF-3-012-2-* | .120 | .220 | .531 | .012 | 1306TF-3-012-4-* | .210 | .300 | .531 | .012 | 1306TF-3-012-6-* | .230 | .330 | .656 |
| .015 | 1306TF-3-015-2-* | .140 | .240 | .531 | .015 | 1306TF-3-015-4-* | .230 | .330 | .531 | .015 | 1306TF-3-015-6-* | .270 | .360 | .656 |
| .018 | 1306TF-3-018-2-* | .160 | .250 | .531 | .018 | 1306TF-3-018-4-* | .190 | .290 | .656 | .018 | 1306TF-3-018-6-* | .300 | .390 | .656 |
| .022 | 1306TF-3-022-2-* | .180 | .270 | .531 | .022 | 1306TF-3-022-4-* | .220 | .310 | .656 | .022 | 1306TF-3-022-6-* | .250 | .370 | .781 |
| .027 | 1306TF-3-027-2-* | .200 | .300 | .531 | .027 | 1306TF-3-027-4-* | .250 | .340 | .656 | .027 | 1306TF-3-027-6-* | .280 | .410 | .781 |
| .033 | 1306TF-3-033-2-* | .230 | .320 | .531 | .033 | 1306TF-3-033-4-* | .280 | .370 | .656 | .033 | 1306TF-3-033-6-* | .320 | .440 | .781 |
| .039 | 1306TF-3-039-2-* | .190 | .290 | .656 | .039 | 1306TF-3-039-4-* | .300 | .400 | .656 | .039 | 1306TF-3-039-6-* | .290 | .420 | .906 |
| .047 | 1306TF-3-047-2-* | .220 | .310 | .656 | .047 | 1306TF-3-047-4-* | .260 | .390 | .781 | .047 | 1306TF-3-047-6-* | .330 | .460 | .906 |
| .056 | 1306TF-3-056-2-* | .240 | .340 | .656 | .056 | 1306TF-3-056-4-* | .290 | .420 | .781 | .056 | 1306TF-3-056-6-* | .370 | .490 | .906 |
| .068 | 1306TF-3-068-2-* | .270 | .360 | .656 | .068 | 1306TF-3-068-4-* | .330 | .460 | .781 | .068 | 1306TF-3-068-6-* | .410 | .530 | .906 |
| .082 | 1306TF-3-082-2-* | .300 | .400 | .656 | .082 | 1306TF-3-082-4-* | .320 | .440 | .906 | .082 | 1306TF-3-082-6-* | .340 | .510 | 1.190 |
| .1 | 1306TF-3-1-2-* | .270 | .390 | .781 | .1 | 1306TF-3-1-4-* | .360 | .480 | .906 | .1 | 1306TF-3-1-6-* | .380 | .550 | 1.190 |
| .12 | 1306TF-3-12-2-* | .300 | .420 | .781 | .12 | 1306TF-3-12-4-* | .400 | .520 | .906 | .12 | 1306TF-3-12-6-* | .430 | .600 | 1.190 |
| .15 | 1306TF-3-15-2-* | .340 | .470 | .781 | .15 | 1306TF-3-15-4-* | .350 | .510 | 1.190 | .15 | 1306TF-3-15-6-* | .490 | .660 | 1.190 |
| .18 | 1306TF-3-18-2-* | .330 | .460 | .906 | .18 | 1306TF-3-18-4-* | .390 | .550 | 1.190 | .18 | 1306TF-3-18-6-* | .540 | .710 | 1.190 |
| .22 | 1306TF-3-22-2-* | .370 | .500 | .906 | .22 | 1306TF-3-22-4-* | .440 | .600 | 1.190 | .22 | 1306TF-3-22-6-* | .520 | .680 | 1.440 |
| .27 | 1306TF-3-27-2-* | .420 | .540 | .906 | .27 | 1306TF-3-27-4-* | .490 | .660 | 1.190 | .27 | 1306TF-3-27-6-* | .580 | .750 | 1.440 |
| .33 | 1306TF-3-33-2-* | .360 | .530 | 1.190 | .33 | 1306TF-3-33-4-* | .470 | .640 | 1.440 | .33 | 1306TF-3-33-6-* | .560 | .760 | 1.690 |
| .39 | 1306TF-3-39-2-* | .400 | .570 | 1.190 | .39 | 1306TF-3-39-4-* | .520 | .690 | 1.440 | .39 | 1306TF-3-39-6-* | .620 | .810 | 1.690 |
| .47 | 1306TF-3-47-2-* | .450 | .620 | 1.190 | .47 | 1306TF-3-47-4-* | .580 | .750 | 1.440 | .47 | 1306TF-3-47-6-* | .690 | .880 | 1.690 |
| .56 | 1306TF-3-56-2-* | .500 | .670 | 1.190 | .56 | 1306TF-3-56-4-* | .550 | .750 | 1.690 | .56 | 1306TF-3-56-6-* | .680 | .880 | 1.940 |
| .68 | 1306TF-3-68-2-* | .560 | .720 | 1.190 | .68 | 1306TF-3-68-4-* | .620 | .820 | 1.690 | .68 | 1306TF-3-68-6-* | .760 | .960 | 1.940 |
| .82 | 1306TF-3-82-2-* | .540 | .700 | 1.440 | .82 | 1306TF-3-82-4-* | .690 | .890 | 1.690 | .82 | 1306TF-3-82-6-* | .850 | 1.050 | 1.940 |
| 1.0 | 1306TF-3-1.0-2-* | .590 | .780 | 1.440 | 1.0 | 1306TF-3-1.0-4-* | .700 | .900 | 1.940 | 1.0 | 1306TF-3-1.0-6-* | .950 | 1.150 | 1.940 |
| 1.25 | 1306TF-3-1.25-2-* | .590 | .790 | 1.690 | 1.25 | 1306TF-3-1.25-4-* | .790 | .990 | 1.940 | 1.25 | 1306TF-3-1.25-6-* | .990 | 1.180 | 2.250 |
| 1.5 | 1306TF-3-1.5-2-* | .660 | .850 | 1.690 | 1.5 | 1306TF-3-1.5-4-* | .880 | 1.080 | 1.940 | 1.5 | 1306TF-3-1.5-6-* | 1.090 | 1.290 | 2.250 |
| 2.0 | 1306TF-3-2.0-2-* | .700 | .900 | 1.940 | 2.0 | 1306TF-3-2.0-4-* | .950 | 1.150 | 2.250 | | | | | |
| 3.0 | 1306TF-3-3.0-2-* | .880 | 1.080 | 1.940 | 3.0 | 1306TF-3-3.0-4-* | 1.190 | 1.390 | 2.250 | | | | | |

* - Please insert appropriate tolerance code