

# DUAL POLARITY HIGH VOLTAGE MODULES

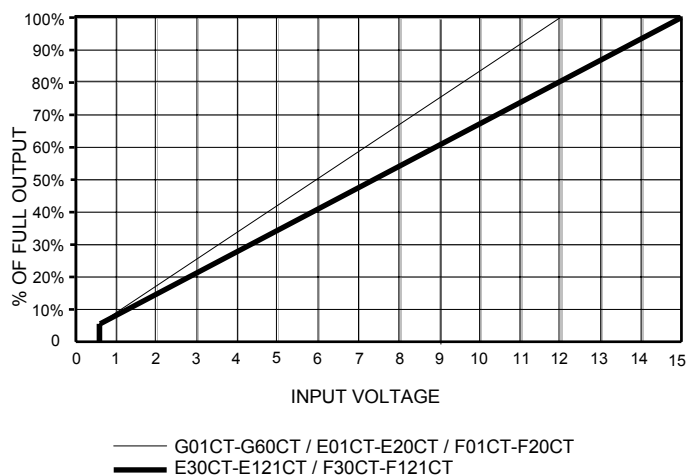
0 to + and - 50 through + and - 6000 VDC, @ 1.5, 3, and 10 Watts

CT SERIES



The CT Series is a line of compact high voltage modules that provide + and - 50 volts through + and - 6000 volts at 1.5w, 3w, and 10 watts\*<sup>1</sup> with an output center tap feature which, when grounded, provides both positive and negative high voltage outputs from one, compact, low cost module. All CT models feature an isolated output, low ripple, and low EMI/RFI by incorporating a quasi-sinewave oscillator, fully enclosed transformer, low leakage current and input/output filtering. Positive and negative load currents can be balanced to keep positive and negative voltages approximately equal. Call, fax or e-mail with your requirements for immediate attention. Technical assistance is readily available.

TYPICAL INPUT vs. OUTPUT VOLTAGES



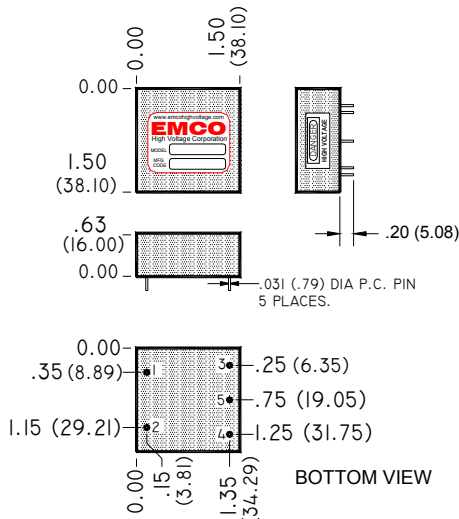
- \*Notes
1. At Maximum Rated Output Voltage
  2. Measured between the + and - output terminals.
  3. Output Voltage is load dependent. Under light or no load conditions, reduce input voltage so maximum rated output voltage is not exceeded.
  4. Specifications after 30 minute warm-up, full load, at 25°C unless otherwise noted.
  5. The rated output current is available at full output voltage and must be derated proportionally as the input voltage decreases. For example: a 500V, 1.5W unit, rated at 3mA at 500V will provide 1.5mA at 250V out.

| MODEL* <sup>4</sup> | POWER | OUTPUT* <sup>3</sup><br>VOLTAGE | OUTPUT* <sup>5</sup><br>CURRENT | INPUT<br>VOLTAGE | INPUT* <sup>1</sup><br>CURRENT<br>(NO LOAD) | INPUT* <sup>1</sup><br>CURRENT<br>(FULL LOAD) | RIPPLE* <sup>2</sup><br>P-P |
|---------------------|-------|---------------------------------|---------------------------------|------------------|---------------------------------------------|-----------------------------------------------|-----------------------------|
| G01CT               | 1.5w  | 0 to +/- 50v                    | 15 mA                           | 0 to 12v         | <100 mA                                     | <250 mA                                       | <1.75 %                     |
| G02CT               |       | 0 to +/- 100v                   | 7.5 mA                          | 0 to 12v         | <100 mA                                     | <250 mA                                       | <0.75 %                     |
| G03CT               |       | 0 to +/- 150v                   | 5 mA                            | 0 to 12v         | <100 mA                                     | <250 mA                                       | <0.75 %                     |
| G04CT               |       | 0 to +/- 200v                   | 3.75 mA                         | 0 to 12v         | <100 mA                                     | <250 mA                                       | <0.10 %                     |
| G05CT               |       | 0 to +/- 250v                   | 3 mA                            | 0 to 12v         | <100 mA                                     | <250 mA                                       | <0.02 %                     |
| G06CT               |       | 0 to +/- 300v                   | 2.5 mA                          | 0 to 12v         | <100 mA                                     | <250 mA                                       | <0.10 %                     |
| G10CT               |       | 0 to +/- 500v                   | 1.5 mA                          | 0 to 12v         | <100 mA                                     | <250 mA                                       | <0.10 %                     |
| G12CT               |       | 0 to +/- 600v                   | 1.25 mA                         | 0 to 12v         | <150 mA                                     | <275 mA                                       | <0.10 %                     |
| G15CT               |       | 0 to +/- 750v                   | 1 mA                            | 0 to 12v         | <125 mA                                     | <275 mA                                       | <0.50 %                     |
| G20CT               |       | 0 to +/- 1000v                  | 0.75 mA                         | 0 to 12v         | <165 mA                                     | <275 mA                                       | <0.50 %                     |
| G25CT               |       | 0 to +/- 1250v                  | 0.6 mA                          | 0 to 12v         | <125 mA                                     | <275 mA                                       | <1.0 %                      |
| G30CT               |       | 0 to +/- 1500v                  | 0.5 mA                          | 0 to 12v         | <125 mA                                     | <300 mA                                       | <1.0%                       |
| G40CT               | 3w    | 0 to +/- 2000v                  | 0.37 mA                         | 0 to 12v         | <125 mA                                     | <300 mA                                       | <1.0 %                      |
| G50CT               |       | 0 to +/- 2500v                  | 0.3 mA                          | 0 to 12v         | <125 mA                                     | <300 mA                                       | <2.0 %                      |
| G60CT               |       | 0 to +/- 3000v                  | 0.25 mA                         | 0 to 12v         | <125 mA                                     | <300 mA                                       | <2.0 %                      |
| E01CT               |       | 0 to +/- 50v                    | 30 mA                           | 0 to 12v         | <175 mA                                     | <425 mA                                       | <1.5%                       |
| E02CT               |       | 0 to +/- 100v                   | 15 mA                           | 0 to 12v         | <125 mA                                     | <400 mA                                       | <0.25 %                     |
| E02-5CT             |       | 0 to +/- 125v                   | 12 mA                           | 0 to 12v         | <125 mA                                     | <400 mA                                       | <0.75 %                     |
| E03CT               |       | 0 to +/- 150v                   | 10 mA                           | 0 to 12v         | <125 mA                                     | <400 mA                                       | <1.0 %                      |
| E05CT               |       | 0 to +/- 250v                   | 6 mA                            | 0 to 12v         | <150 mA                                     | <400 mA                                       | <0.02 %                     |
| E06CT               |       | 0 to +/- 300v                   | 5 mA                            | 0 to 12v         | <175 mA                                     | <400 mA                                       | <0.1%                       |
| E07-5CT             |       | 0 to +/- 375v                   | 4 mA                            | 0 to 12v         | <125 mA                                     | <400 mA                                       | <0.02 %                     |
| E08CT               |       | 0 to +/- 400v                   | 3.75 mA                         | 0 to 12v         | <125 mA                                     | <400 mA                                       | <0.03 %                     |
| E10CT               |       | 0 to +/- 500v                   | 3 mA                            | 0 to 12v         | <125 mA                                     | <400 mA                                       | <0.03 %                     |
| E12CT               | 10w   | 0 to +/- 600v                   | 2.5 mA                          | 0 to 12v         | <125 mA                                     | <400 mA                                       | <0.02 %                     |
| E15CT               |       | 0 to +/- 750v                   | 2 mA                            | 0 to 12v         | <150 mA                                     | <400 mA                                       | <0.05 %                     |
| E20CT               |       | 0 to +/- 1000v                  | 1.5 mA                          | 0 to 12v         | <175 mA                                     | <425 mA                                       | <0.25 %                     |
| E30CT               |       | 0 to +/- 1500v                  | 1 mA                            | 0 to 15v         | <175 mA                                     | <400 mA                                       | <0.25 %                     |
| E40CT               |       | 0 to +/- 2000v                  | 0.75 mA                         | 0 to 15v         | <175 mA                                     | <400 mA                                       | <0.50 %                     |
| E50CT               |       | 0 to +/- 2500v                  | 0.6 mA                          | 0 to 15v         | <175 mA                                     | <400 mA                                       | <0.50 %                     |
| E60CT               |       | 0 to +/- 3000v                  | 0.5 mA                          | 0 to 15v         | <175 mA                                     | <400 mA                                       | <0.50 %                     |
| E70CT               |       | 0 to +/- 3500v                  | 0.43 mA                         | 0 to 15v         | <175mA                                      | <350 mA                                       | <1.00 %                     |
| E80CT               |       | 0 to +/- 4000v                  | 0.25 mA                         | 0 to 15v         | <175 mA                                     | <300 mA                                       | <1.00 %                     |
| E101CT              |       | 0 to +/- 5000v                  | 0.2 mA                          | 0 to 15v         | <175 mA                                     | <300 mA                                       | <1.50 %                     |
| E121CT              |       | 0 to +/- 6000v                  | 0.16 mA                         | 0 to 15v         | <175 mA                                     | <300 mA                                       | <1.50 %                     |
| F01CT               |       | 0 to +/- 50v                    | 100 mA                          | 0 to 12v         | <500 mA                                     | <1.75 A                                       | <1.0 %                      |
| F02CT               | 10w   | 0 to +/- 100v                   | 50 mA                           | 0 to 12v         | <500 mA                                     | <1.5 A                                        | <1.0 %                      |
| F03CT               |       | 0 to +/- 150v                   | 33.3 mA                         | 0 to 12v         | <500 mA                                     | <1.5 A                                        | <1.0 %                      |
| F04CT               |       | 0 to +/- 200v                   | 25 mA                           | 0 to 12v         | <500 mA                                     | <1.5 A                                        | <1.0 %                      |
| F05CT               |       | 0 to +/- 250v                   | 20 mA                           | 0 to 12v         | <500 mA                                     | <1.5 A                                        | <0.1 %                      |
| F06CT               |       | 0 to +/- 300v                   | 16 mA                           | 0 to 12v         | <500 mA                                     | <1.5 A                                        | <0.1 %                      |
| F08CT               |       | 0 to +/- 400v                   | 12.5 mA                         | 0 to 12v         | <500 mA                                     | <1.5 A                                        | <0.1 %                      |
| F10CT               |       | 0 to +/- 500v                   | 10 mA                           | 0 to 12v         | <500 mA                                     | <1.5 A                                        | <0.1 %                      |
| F12CT               |       | 0 to +/- 600v                   | 8.33 mA                         | 0 to 12v         | <500 mA                                     | <1.5 A                                        | <0.1 %                      |
| F15CT               |       | 0 to +/- 750v                   | 6.6 mA                          | 0 to 12v         | <500 mA                                     | <1.5 A                                        | <0.1 %                      |
| F20CT               |       | 0 to +/- 1000v                  | 5 mA                            | 0 to 12v         | <500 mA                                     | <1.5 A                                        | <1.0 %                      |
| F30CT               |       | 0 to +/- 1500v                  | 3.3 mA                          | 0 to 15v         | <500 mA                                     | <1.5 A                                        | <1.0 %                      |
| F40CT               |       | 0 to +/- 2000v                  | 2.5 mA                          | 0 to 15v         | <500 mA                                     | <1.5 A                                        | <1.0 %                      |
| F50CT               | 10w   | 0 to +/- 2500v                  | 2 mA                            | 0 to 15v         | <500 mA                                     | <1.5 A                                        | <1.0 %                      |
| F60CT               |       | 0 to +/- 3000v                  | 1.66 mA                         | 0 to 15v         | <500 mA                                     | <1.5 A                                        | <1.0 %                      |
| F70CT               |       | 0 to +/- 3500v                  | 1.5 mA                          | 0 to 15v         | <500 mA                                     | <1.5 A                                        | <2.5 %                      |
| F80CT               |       | 0 to +/- 4000v                  | 1.25 mA                         | 0 to 15v         | <500 mA                                     | <1.5 A                                        | <5.0 %                      |
| F101CT              |       | 0 to +/- 5000v                  | 1 mA                            | 0 to 15v         | <500 mA                                     | <1.5 A                                        | <5.0 %                      |
| F121CT              |       | 0 to +/- 6000v                  | .834mA                          | 0 to 15v         | <500 mA                                     | <1.5 A                                        | <5.0 %                      |

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**G01CT  
THRU  
G20CT**



**AVAILABLE OPTIONS**

**AB-External Mounting Box**

Epoxy: **A.** Low Outgassing (NASA approved per ASTM E-595-93)

**B.** UL 94 V0 flammability rating

RoHS(- 'R' suffix denotes the product is designed to meet RoHS requirements i.e G20CTR)

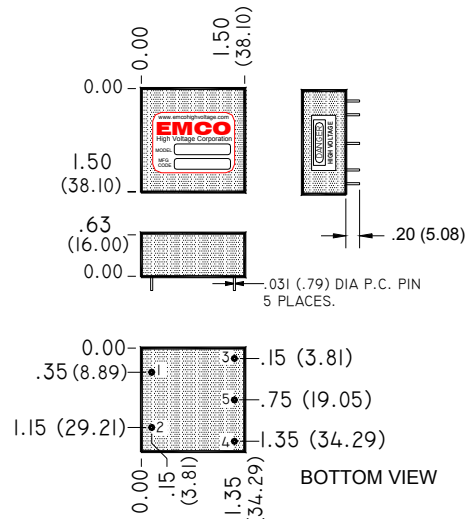
**WEIGHT:** 1.5 oz. Approx. (42grams)

**PACKAGING:** Epoxy Encapsulated

**CASE MATERIAL:** Glass-filled epoxy

**PINS:** 0.031" Diameter(0.76), 0.2"Long(5.08)

**G25CT  
THRU  
G60CT**



**AVAILABLE OPTIONS**

**AB-External Mounting Box**

Epoxy: **A.** Low Outgassing (NASA approved per ASTM E-595-93)

**B.** UL 94 V0 flammability rating

RoHS(- 'R' suffix denotes the product is designed to meet RoHS requirements i.e G50CTR)

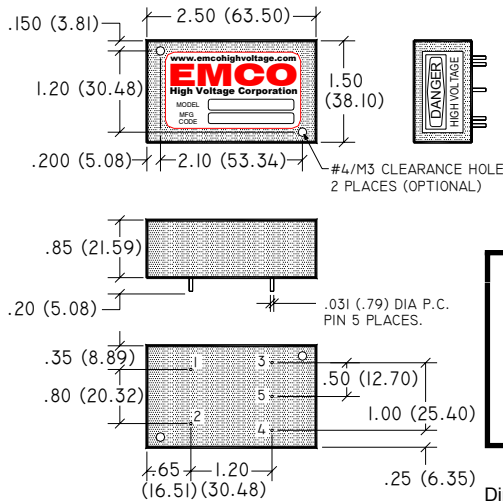
**WEIGHT:** 1.5 oz. Approx.(42grams)

**PACKAGING:** Epoxy Encapsulated

**CASE MATERIAL:** Glass-filled epoxy

**PINS:** 0.031" Diameter(0.76), 0.2"Long(5.08)

**E01CT  
THRU  
E60CT**



**BOTTOM VIEW**

**AVAILABLE OPTIONS**

**AB-External Mounting Box**

**H- Mounting Holes**

Epoxy: **A.** Low Outgassing (NASA approved per ASTM E-595-93)

**B.** UL 94 V0 flammability rating

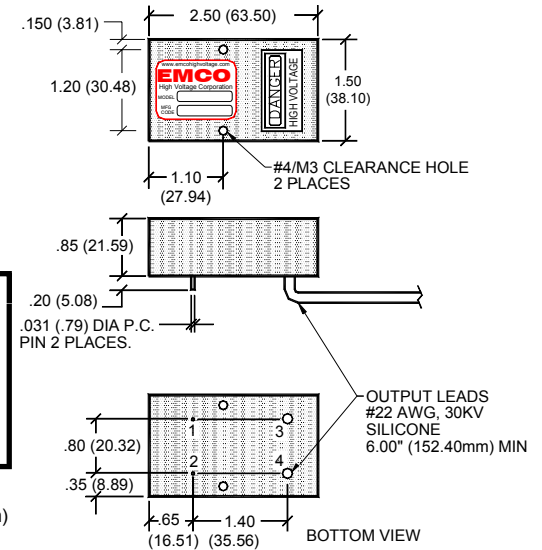
RoHS(- 'R' suffix denotes the product is designed to meet RoHS requirements i.e E01CTR)

**WEIGHT:** 3 oz. Approx.(85grams)

**PACKAGING:** Epoxy Encapsulated

**CASE MATERIAL:** Glass- filled Epoxy

**E70CT  
THRU  
E121CT**



**TABLE APPLIES TO ALL CASES**

| PIN # | FUNCTION          |
|-------|-------------------|
| 1     | (+) Input         |
| 2     | (-) Input         |
| 3     | (+) Output        |
| 4     | (-) Output        |
| 5     | Output Center Tap |

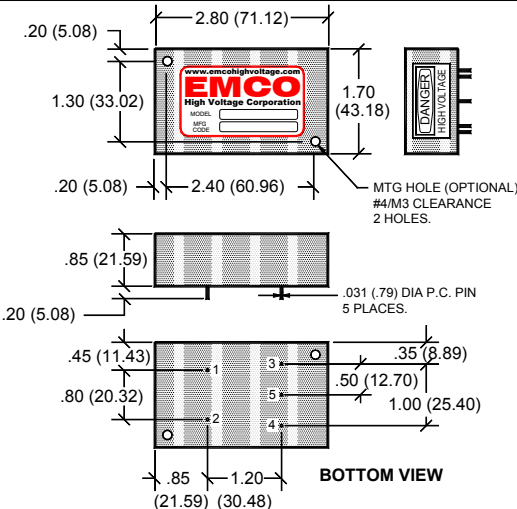
Dimensions are in Inches  
Dimensional Tolerances:  $\pm .03$  (.76mm)  
(Metric Equivalents in

**WEIGHT:** 3 oz. Approx.(85grams)

**PACKAGING:** Epoxy Encapsulated

**CASE MATERIAL:** Glass- filled Epoxy

**F01CT  
THRU  
F60CT**



**BOTTOM VIEW**

**AVAILABLE OPTIONS**

**H- Mounting Holes**

Epoxy: **A.** Low Outgassing (NASA approved per ASTM E-595-93)

**B.** UL 94 V0 flammability rating

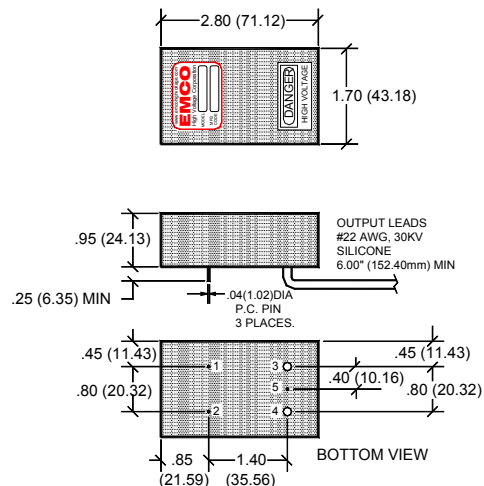
RoHS(- 'R' suffix denotes the product is designed to meet RoHS requirements i.e F60CTR)

**WEIGHT:** 4 oz. Approx (113 grams)

**PACKAGING:** Epoxy Encapsulated

**CASE MATERIAL:** Aluminum

**F80CT  
THRU  
F121CT**



**AVAILABLE OPTIONS**

Epoxy: **A.** Low Outgassing (NASA approved per ASTM E-595-93)

**B.** UL 94 V0 flammability rating

RoHS(- 'R' suffix denotes the product is designed to meet RoHS requirements i.e F121CTR)

**WEIGHT:** 4 oz. Approx(113 grams)

**PACKAGING:** Epoxy Encapsulated

**CASE MATERIAL:** Aluminum