

### SP- 48

#### Description:

Triad's high reliability audio transformers provide the durability and precision required in today's demanding designs. These transformers are available for a wide variety of applications.

#### Electrical Specifications (@25C)

| Power level (mW) | Matching Impedance |           | Max. Ma DC Unbalance in Primary | DC Resistance ( $\Omega$ ) |           | Overall Turns Ratio |
|------------------|--------------------|-----------|---------------------------------|----------------------------|-----------|---------------------|
|                  | Primary            | Secondary |                                 | Primary                    | Secondary |                     |
| 50               | 7,500 CT           | 12        | 1.0                             | 796.0                      | 2.9       | 25.0:1.0            |

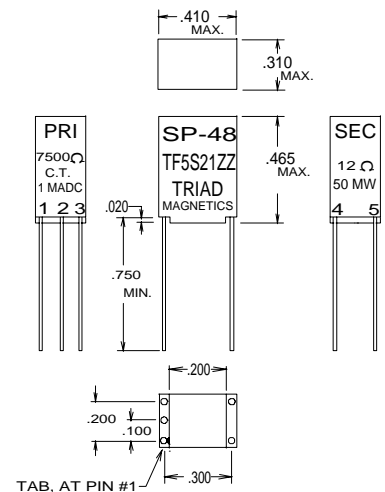
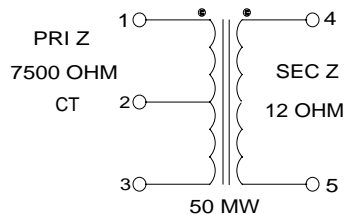
**Frequency Response:**  $\pm 2.0$  DB, at 300 Hz to 100K Hz

**Pri-Sec Hipot test (Pri-Sec):** 1,000 VRMS for 1 sec.

**Working voltage:** 150VDC

#### Construction:

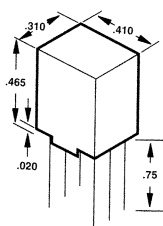
Plug-in terminals are precision spaced to provide fixed mounting centers. Epoxy molded case includes a .020" recess for ease of solder inspection. Leads are made of high strength Nickel alloy, gold plated and are .020" in diameter.



**RoHS Compliance:** As of manufacturing date February 2005, all standard products meet the requirements of 2002/95/EC, known as the RoHS initiative.

# Audio Transformers

## MIL-T-27E



**Red Spec  
(MIL-T-27E)**

### :: Description

Triad high reliability audio transformers provide the durability and precision required in today's demanding designs. These transformers are available for a wide variety of applications. The line of Red Spec audio transformers is designed and constructed to meet the rigid requirements of MIL-T-27E. These transformers feature an epoxy molded case, gold plated leads and exceptional operation from 300 Hz to 100 kHz.

### :: Specifications

**Frequency Response Ranges:** 300 Hz to 100 kHz

### :: Red Spec Printed Circuit Audio Transformers

| Section | Type No. | Mil Type No. | Power Level in mW | Matching Impedance  |               | Max. Ma DC Unbalanced in Primary | DC Resistance |              | Overall Turns Ratio | Figure No. |
|---------|----------|--------------|-------------------|---------------------|---------------|----------------------------------|---------------|--------------|---------------------|------------|
|         |          |              |                   | Primary             | Secondary     |                                  | Primary       | Secondary    |                     |            |
| A       | SP-4     | TF5S21ZZ     | 10                | 200,000 CT          | 1,000 CT      | 0.0                              | 5,300.0       | 100.0        | 14.1:1.0            | 3          |
| B       | SP-5     | TF5S21ZZ     | 25                | 50,000 CT           | 1,000 CT      | 0.0                              | 3,800.0       | 75.0         | 7.1:1.0             | 3          |
| C       | SP-13    | TF5S21ZZ     | 40                | 25,000 CT/20,000 CT | 1,000/800 CT  | 0.5                              | 1,700.0       | 115.0        | 5.0:1.0             | 3          |
| D       | SP-20    | TF5S21ZZ     | 50                | 10,000 CT           | 1,200 CT      | 1.0                              | 1,050.0       | 200.0        | 2.88:1.0            | 3          |
|         | SP-21    | TF5S21ZZ     | 50                | 10,000 CT           | 2,000 CT      | 1.0                              | 1,050.0       | 330.0        | 2.24:1.0            | 3          |
|         | SP-22    | TF5S21ZZ     | 50                | 10,000              | 2,000 CT/500§ | 1.0                              | 1,050.0       | 146.0/168.0§ | 4.48:1.0:1.0        | 4          |
|         | SP-29    | TF5S21ZZ     | 50                | 10,000 CT           | 500 CT        | 1.0                              | 1,050.0       | 80.0         | 4.47:1.0            | 3          |
|         | SP-33    | TF5S21ZZ     | 50                | 1,000               | 50            | 3.0                              | 145.0         | 8.0          | 4.4:1.0             | 1          |
|         | SP-42    | TF5S21ZZ     | 50                | 150 CT              | 12            | 10.0                             | 18.0          | 2.7          | 3.54:1.0            | 2          |
|         | SP-48    | TF5S21ZZ     | 50                | 7,500 CT            | 12            | 1.0                              | 796.0         | 2.9          | 25.0:1.0            | 2          |
|         | SP-49    | TF5S21ZZ     | 50                | 300 CT              | 600           | 7.0                              | 41.0          | 98.0         | 1.0:1.42            | 2          |
|         | SP-50    | TF5S21ZZ     | 50                | 500 CT              | 600           | 3.0                              | 67.0          | 98.0         | 1.0:1.1             | 2          |
|         | SP-51    | TF5S21ZZ     | 50                | 900 CT              | 600           | 4.0                              | 104.0         | 96.0         | 1.22:1.0            | 2          |
|         | SP-52    | TF5S21ZZ     | 50                | 1,500 CT            | 600           | 3.0                              | 168.0         | 92.0         | 1.58:1.0            | 2          |
|         | SP-66    | TF5S21ZZ     | 50                | 10,000 CT           | 10,000 CT     | 1.0                              | 1,000.0       | 1,300.0      | 1.0:1.0             | 3          |
|         | SP-67    | TF5S21ZZ     | 50                | 600 CT              | 600 CT        | 3.0                              | 72.0          | 92.0         | 1.0:1.0             | 3          |
| SP-68   | TF5S21ZZ | 50           | 10,000            | 10,000 CT/2,500§    | 1.0           | 1,000.0                          | 565.0/650.0§  | 2.1:1.0      | 4                   |            |
| SP-69   | TF5S21ZZ | 50           | 600               | 600 CT/150§         | 3.0           | 72.0                             | 40.0/45.0§    | 2.0:1.0:1.0  | 4                   |            |
| SP-70   | TF5S21ZZ | 50           | 600               | 600                 | 3.0           | 72.0                             | 92.0          | 1.0:1.0      | 1                   |            |
| E       | SP-128   | TF5S21ZZ     | •                 | 0.1H                | •             | 5.0                              | 15.0          | •            | •                   | 5          |
|         | SP-310   | Shield Only  |                   |                     |               |                                  |               |              |                     |            |

CT = Center Tap § Split secondary

### :: Outline Dimensions

#### Technical Notes

1. Plug-in terminals are precision spaced to provide fixed mounting centers.
2. Red Spec transformers are hi-pot tested at 1,000 VRMS.
3. 150 VDC working voltage.
4. Red Spec transformers feature small footprint base dimensions of .310 by .410 inch.
5. Pin diameter = .020 inch.

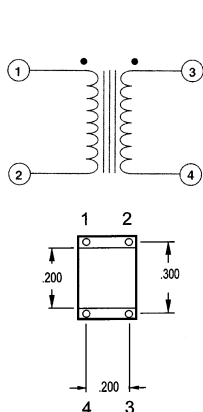


Figure 1

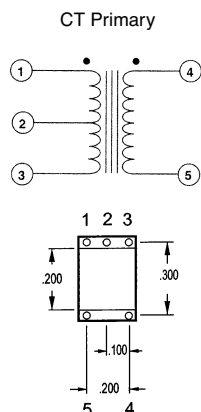


Figure 2

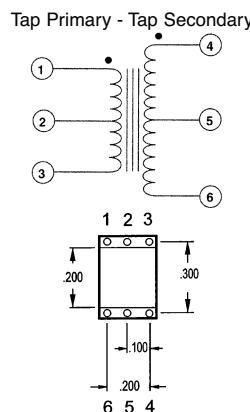


Figure 3

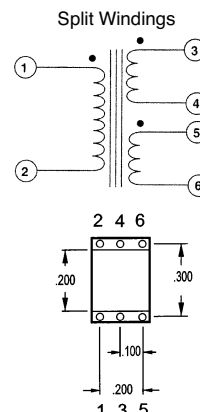


Figure 4

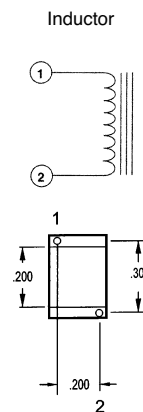


Figure 5