CURRENT TRANSFORMER DESIGN FORM

Date: __________________________ Telephone Number: __________________________
Customer Name: __________________________ Fax Number: __________________________
Design Engineer: __________________________ E-mail Address: __________________________
Program/Project Name: __________________________ Application: Measure ☐ Control ☐ Monitor ☐ Other ☐

Input (Primary):

\[ I_{IN} \]

Operating Frequency \[ \text{Hz} \]
Maximum Current \[ A_{RMS} \]
Applicable Duty Cycle

Output (Secondary):

\[ I_{OUT} \]

<table>
<thead>
<tr>
<th>Output</th>
<th>[ V_{bus} ]</th>
<th>[ A_{bus} ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burden</td>
<td>[ \Omega ]</td>
<td>[ V/A ]</td>
</tr>
</tbody>
</table>

| Topology of SMPS | (if Applicable)
|------------------|------------------|

Minimum Inside Diameter: \[ \text{PRI Conductor} \] ; Maximum Outside Diameter: \[ \text{SEC. Coil} \]

Termination:
- UL1015 Stranded Wire
- TEFLON Stranded Wire
- PC Pins
- SMD
- Lead Length
- Other

Insulation Class:
- B (130°C)
- F (155°C)
- H (180°C)
- Other

Dielectric Isolation between PRI and SEC: \[ V_{bus} \text{ for } seconds \] for ____ seconds

Temperature & Cooling Information: Max. Ambient \[ ^\circ C \]

Applicable Standards:
- IEC
- ANSI
- Other

Accuracy:
- 0.5%
- 1.0%
- 2.0%
- Other

Phase Errors:
- 0.5°
- 1.0°
- 1.5°
- 2.0°
- Other

Constructions:
- Secondary Coil only
- Primary Conductor Built-in
- Other

Note:

Maximum Desired Size: \[ \text{Length} \times \text{Width} \times \text{Height} \]

Minimum Inside Diameter: \[ \text{PRI Conductor} \] ; Maximum Outside Diameter: \[ \text{SEC. Coil} \]

[DESIGN FORM is available at URL: http://www.VitecCorp.com]
- For Switch Mode Power Supply Applications -

Product Selection Considerations:

Current Sense Transformers used in a SMPS normally are for control, circuit protection, and monitoring features:

- Switching Frequency [f]
- Maximum Duty Cycle [DuCymax]
- Range of Current being measured [Ippmax]
- Primary Peak Current [Ipp]
- Primary Conductor / Secondary Winding Turns Ratio [r = Ns / Np]
- Output Voltage [Vout]
- Terminating Resistor [Rt]
- Size
- Mounting Structure

- Load resistor value can be determined by selecting desired Primary Current and Output Voltage
- Maximum Output Voltage shown above is determined by Primary Current and load resistor value

VOLTAGE-MODE or CURRENT-MODE SPLIT-CORE CURRENT TRANSFORMERS

- Frequency Range: from 50~60 Hz
- Rated Current of Primary Conductor: 50A, 100A, and 200A
- Linearity Accuracy ± 1% between 5% to 120% of Rated Current
- Excellent Phase Shift at 1° MAX on 100A and 200A Devices
- Various Voltage Outputs: 0.3333V, 1V, and Custom
- Dielectric Strength: starting at 3000Vrms MIN.

VOLTAGE-MODE OR CURRENT-MODE SOLID-CORE CURRENT TRANSFORMERS

- Frequency Range: from 50Hz to 400Hz
- Rated Current of Primary Conductor: Up to 1000A
- Phase Shift < 1° between 5% to 120% of Rate Current
- Linearity Accuracy ± 0.5% between 5% to 120% of Rate Current
- Dielectric Strength: 3750 Vrms MIN.
- Operating Temperature Ranges: from -40°C to 85°C
- Various Voltage Outputs
- UL Recognized 6° Bonded Lead Wires as Output Terminations

PRECISION TOMBSTONE CURRENT SENSE TRANSFORMERS

- Frequency Range: from 50Hz to 400Hz or Above 50 kHz
- Measurement Applications: High Accuracy and Low Phase-Shift
- Excellent linearity over rated current range
- Rated Current of Primary Conductor: Up to 500A
- Variety of Encapsulated Packages
- Dielectric Strength: starting at 3500 Vrms MIN.
- Application-Specific Mounting Structure Available upon Request

THT CURRENT SENSE TRANSFORMER WITH PRIMARY CONDUCTOR(S) BUILT-IN

- Frequency Range: from 10kHz to 300 kHz
- Rated Current of Primary Conductor: Up to 200A
- Various Secondary Outputs Available
- Variety of Encapsulated Packages
- Dielectric Strength (Sealed): starting at 3750 Vrms MIN.
- Dielectric Strength (Open Frame): starting at 1250 Vrms MIN.

SMT CURRENT SENSE TRANSFORMER WITH PRIMARY CONDUCTOR(S) BUILT-IN

- Frequency Range: from 20 kHz to 1MHz
- Rated Current of Primary Conductor: Up to 35A
- Various Secondary Outputs Available
- Variety of Miniature Package Selections
- Dielectric Strength Voltages: starting at 500Vrms MIN.
- Height: starting at 3.5mm MAX.