Avoid short circuit between +BC and -BC. It may cause the failure of inside components.
To use TUHS, external components are required. Refer to the instruction manual for details.

### Ordering Information

<table>
<thead>
<tr>
<th>TUH</th>
<th>S</th>
<th>10</th>
<th>F</th>
<th>05</th>
</tr>
</thead>
</table>

- **Series name**
- **Single output**
- **Output wattage**
- **Universal Input**
- **Output voltage**

### Specifications

#### Input

<table>
<thead>
<tr>
<th>Model</th>
<th>TUHS10F05</th>
<th>TUHS10F12</th>
<th>TUHS10F15</th>
<th>TUHS10F24</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX OUTPUT WATTAGE [W]</td>
<td>10.00</td>
<td>10.80</td>
<td>10.10</td>
<td>10.80</td>
</tr>
<tr>
<td>DC OUTPUT</td>
<td>5V 2A</td>
<td>12V 0.9A</td>
<td>15V 0.67A</td>
<td>24V 0.45A</td>
</tr>
</tbody>
</table>

#### Output

<table>
<thead>
<tr>
<th>Model</th>
<th>TUHS10F05</th>
<th>TUHS10F12</th>
<th>TUHS10F15</th>
<th>TUHS10F24</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTPUT VOLTAGE [V]</td>
<td>5</td>
<td>12</td>
<td>15</td>
<td>24</td>
</tr>
<tr>
<td>CURRENT [A]</td>
<td>2</td>
<td>0.9</td>
<td>0.67</td>
<td>0.45</td>
</tr>
<tr>
<td>LINE REGULATION [mV]</td>
<td>20max</td>
<td>48max</td>
<td>60max</td>
<td>96max</td>
</tr>
<tr>
<td>LOAD REGULATION [mV]</td>
<td>40max</td>
<td>100max</td>
<td>120max</td>
<td>150max</td>
</tr>
<tr>
<td>RIPPLE [mVpp]</td>
<td>120max</td>
<td>160max</td>
<td>160max</td>
<td>200max</td>
</tr>
<tr>
<td>RIPPLE NOISE [mVpp]</td>
<td>400max</td>
<td>480max</td>
<td>480max</td>
<td>580max</td>
</tr>
<tr>
<td>TEMPERATURE REGULATION [mV]</td>
<td>100max</td>
<td>180max</td>
<td>240max</td>
<td>360max</td>
</tr>
<tr>
<td>DRIFT [mV]</td>
<td>20max</td>
<td>48max</td>
<td>60max</td>
<td>96max</td>
</tr>
<tr>
<td>OUTPUT VOLTAGE SETTING [V]</td>
<td>4.90 - 5.30</td>
<td>11.40 - 12.60</td>
<td>14.25 - 15.75</td>
<td>23.00 - 25.00</td>
</tr>
</tbody>
</table>

#### Protection Circuit and Others

- Overcurrent Protection: Works over 105% of rating and recover automatically
- Overvoltage Protection: 5.50 - 8.00
- Isolation Input-Output: AC3,000V 1 minute, Cutoff current = 10mA, DC500V 50 MΩ min (20 ± 15°C)

#### Environment

- Operating Temp. & Humidity and Altitude: -40 to +85°C, 20 - 95%RH (Non-condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max
- Storage Temp. & Humidity and Altitude: -40 to +100°C, 20 - 95%RH (Non-condensing), 9,000m (30,000 feet) max
- Vibration: 10 - 55Hz, 49.0m/s² (5G), 3 minutes period, 60 minutes each along X, Y and Z axis
- Impact: 196.1m/s² (20G), 11ms, once each along X, Y and Z axis

#### Safety and Noise Regulations

- Agency Approvals: UL60950-1, C-UL (CSA60950-1), EN60950-1
- Conducted Noise: Complies with FCC-B, VCCI-B, CISPR-B, EN55022-B
- Harmonic Attenuator: Complies with IEC61000-3-2 (Class A) (Not built-in to active filter)

#### Others

- Case Size/Weight: 33.0 X 15.0 X 22.0mm [1.3 X 0.59 X 0.86 inches] (W X H X D) / 25g max
- Cooling Method: Convection / Forced air

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1. Refer to instruction manual for measuring method of electric characteristics.
2. Drift is the change in DC output for an eight-hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated value.
3. Do not ground secondarily circuit, in case of a standard adapted.
4. Measured with 47μF capacitor as Cbc.
TUHS10

External view

Recommend size for processing PCB
(TOP VIEW)

-BC +BC

AC1

+Vout

-BC

AC2

+Vout

-BC

Name Plate

External view

Tolerance:
±0.5 [±0.02]

Weight: 25g max

Case material: PBT

Pin material: Copper

Plating treatment of pin: Lead free plating

Dimensions in mm, [ ]=inches

Dimensions in: mm [inch]

Div.: 0.2inch

TUHS-7