Flyback Transformer
For Silicon Labs Si88xx 2.5kV Isolated DC-DC Converter

- Developed for use with Silicon Labs Si88xx isolated dc-dc converter reference designs.
- 2500 Vrms, one minute isolation from primary to secondary
- Designed to meet basic insulation class with 3 mm creepage and clearance
- AEC-200 Grade 1 qualified (~40°C to +125°C ambient)

Core material: Ferrite
Terminations: RoHS tin-silver-copper (95.5/3.8/0.7) over tin over nickel over phosph bronze.
Weight: 0.9 g
Ambient temperature: –40°C to +125°C
Maximum part temperature: +135°C
Storage temperature: Component: –40°C to +135°C.
Tape and reel packaging: ~40°C to +80°C
Resistance to soldering heat: Max three 40 second reflows at ~260°C, parts cooled to room temperature between cycles.
Moisture Sensitivity Level (MSL): 1 (unlimited floor life at <30°C / 85% relative humidity)
Failures in Time (FIT) / Mean Time Between Failures (MTBF): 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

Part number1  Input voltage (V)  Inductance2 ±5% (µH)  Leakage inductance max (µH)  DCR max (Ohms)  Turns ratio pri:sec  Isolation4 (Vrms)  Isat5 (A)  Output
TA7608-AL_  3.0 – 5.5  2.0  0.06  0.033  0.105  1 : 4  2500  4.25  5 V, 0.4 A

1. When ordering, specify a packaging code:
   - **TA7608-ALD**
     - **D** = 13” machine ready reel. EIA-481 embossed plastic tape.
     - **B** = Less than full reel. In tape, but not machine ready.
     - To have a leader and trailer added ($25 charge), use code letter D instead.

2. Inductance is for the primary, measured on an Agilent/HP 4284 at 100 kHz, 0.1 Vrms, 0 Adc.
3. Leakage inductance measured between pins 2 and 3 at 100 kHz, 0.1 Vrms, 0 Adc with pins 8 and 5 shorted.
4. Isolation (hipot) measured between windings for one minute.
5. DC current that causes an inductance drop of 30% (typ) from its value without current.
6. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Recommended Land Pattern

*Dimensions are in inches/mm*

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