

SCIENTIFIC CONVERSION, INC.

SuperShielded[™] Digital Audio Transformer SC947-02LF *Ultimate Performance 1:1 ratio AES/EBU 110 Ω and AES 3id 75 Ω*

Our latest part for Broadcast and Pro Audio applications offers the best performance ever in a 1:1 ratio transformer with optimal bandwidth and low pulse aberration to cover the sampling rate range from 32 kHz to 192 kHz for all digital audio interfaces AES/EBU 110 Ω , SP/DIF or AES 3id 75 Ω . SC947-02LF incorporates a special interwinding shield to reduce interwinding capacitance to 0.5 pF and to further increase high frequency common mode noise rejection. It outperforms all other Digital Audio transformers by 22..38 dB.

Over 5 years of R&D at Scientific Conversion optimized this advanced transformer specifically for Digital Audio applications; i.e. Broadcast equipment, cinema production and studio and mastering converters, low jitter receivers, high-end consumer, satellite uplinks, etc. SC947-02LF provides a 1:1 ratio for interfacing transmitters and receivers in either 110 Ω or 75 Ω environments. Extremely wide bandwidth, low aberration, lowest capacitance and low leakage inductance characterize this unique device. Since 2005, SC947-02LF has achieved wide application in the Broadcast, Pro Audio and High End Audio market.

SC947-02LF is packaged in a low profile SMD pattern 6.3 mm x 9.5 mm x 8.2 mm. The PCB footprint is 9.5 mm x 11 mm. The SC947-02LF is designed for use with all RS-485/RS-422 and digital audio transmitters, receivers, transceivers.

Specifications include an astounding 3 nS rise-time! Bandwidth extends from 15 kHz to 125 MHz. This new shielded part has a "Super" low capacitance of 0.5 pF, which reduces radiated and received noise and provides decreased jitter and better audio quality in high interference environments. The low capacitance provides increased reduction of emitted high frequency common mode noise, which improves your product's EMI and transient susceptibility compliance (IEC/CISPR/FCC). At 10 MHz, the SC947-02LF common-mode rejection ratio is 50 dB!

For optimum shielding, please use these connections: pins 1, 4 towards connector pins 5, 8 towards IC, (TX or RX), both pin 6 AND pin 7 to ground plane of IC nearest the return pin.

Our exclusive products are designed by digital audio and magnetics experts, and are handmade in our factory in the USA. For further technical information, engineering application or sales information, please contact Scientific Conversion directly.

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SC947-02LF SuperShielded™ 1:1 ratio Digital Audio Surface Mount Transformer

SPECIFICATIONS

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| | |
| RATIO | 1:1 |
| INDUCTANCE, PRIMARY | 350 uH typ |
| INDUCTANCE, SECONDARY | 350 uH typ |
| INDUCTANCE, LEAKAGE | 450 nH typ |
| INTERWINDING CAPACITANCE SHIELD FLOATING | 3 pF typ |
| INTERWINDING CAPACITANCE SHIELD GROUNDED | 0.5 pF typ |
| E-T PRODUCT | 25 V-uS typ |
| RESISTANCE PRI / SEC | 0.45 / 0.50 Ω typ |
| BANDWIDTH (3dB) IN 110 Ω Environment | 15 KHz - 125 MHz typ |
| VOLTAGE ISOLATION P-S | 500 VDC |
| RISETIME (110 Ω) | 3 nS typ |
| PHYSICAL DIMENSIONS | |
| HEIGHT | 6.3 mm max |
| WIDTH | 9.5 mm max |
| BODY LENGTH | 8.2 mm max |
| PCB FOOTPRINT | 11.2 mm max |

SC947-02TM