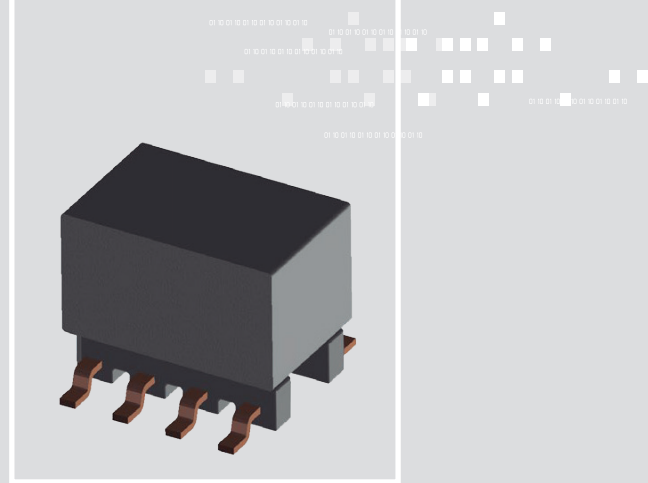


New

PLC-LW-002

2-30MHz 1:1:1 15μH

INDUCTIVE COMPONENTS / PLC TRANSFORMERS



APPLICATIONS

- › Automotive EV/PHV AC/DC onboard battery chargers

01 FEATURES

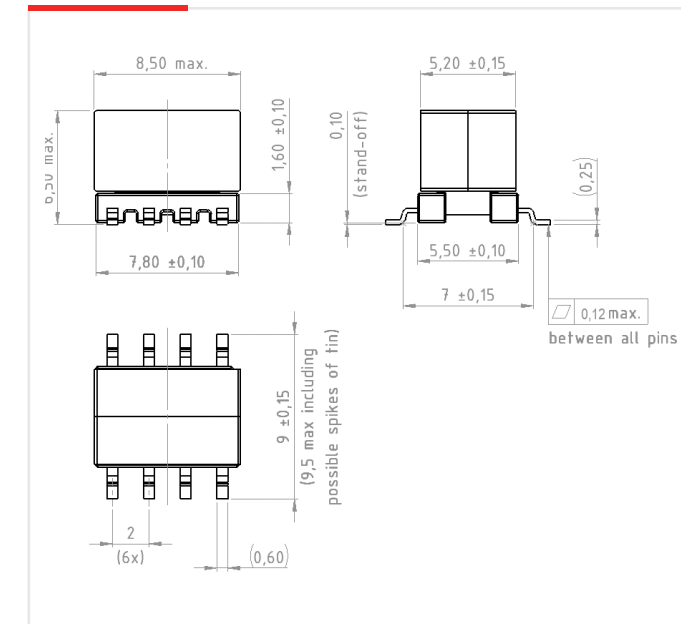
- › Signal transformer for HPGP (HomePlug Green PHY™) PLC modems.
- › For power line communication devices acc. to IEC 15118 standard.
- › For charging systems according to IEC 61851-1.
- › Insertion loss < 1dB on 2-30MHz (100-120 Ohms).
- › SMD coil-former technology.
- › Wide operating temperature range -40 to +125°C.
- › UL94 and RoHS materials.
- › Designed for AEC-Q200.
- › Weight: approx 1gram.

02 OPERATION

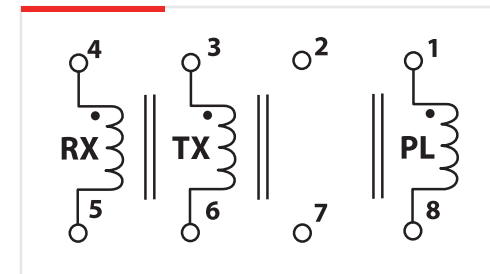
- › PLC signal transmission
- › OBC with communication with the charging station

03 SPECIFICATIONS

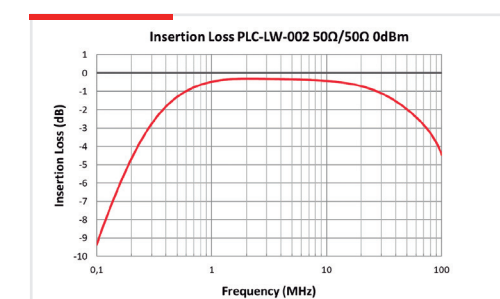
DIMENSIONS (mm)



ELECTRICAL DIAGRAM



TYPICAL INDUCTANCE



ELECTRICAL SPECIFICATIONS

INDUCTANCE at 25°C

$$L_{1-8} = L_{3-6} = L_{4-5} \quad (2\text{MHz}/1\text{Vac}) \quad 9\mu\text{H MIN} < (22\mu\text{H TYP}) < 40\mu\text{H MAX}$$

TURN-RATIO

$$N_{1-8} : N_{3-6} : N_{4-5} \quad (10\text{kHz}/1\text{Vac}) \quad 1:1:1$$

DC RESISTANCE at 25°C

$$\text{DCR}_{1-8} = \text{DCR}_{3-6} = \text{DCR}_{4-5} \quad 90\text{m}\Omega \text{ MAX (70m}\Omega \text{ TYP)}$$

LEAKAGE INDUCTANCE

$$L_{\text{LK}} \quad (100\text{kHz}/1\text{Vac}) \quad 0.25\mu\text{H MAX (0.19}\mu\text{H TYP)}$$

STRAY CAPACITANCE

$$C_{\text{PS}} \quad (100\text{kHz}/1\text{Vac}) \quad 7\text{pF MAX (5pF TYP)}$$

DIELECTRIC STRENGTH

$$\text{Between Windings} \quad 500\text{Vac (50Hz}/1\text{mA}/1\text{min)}$$