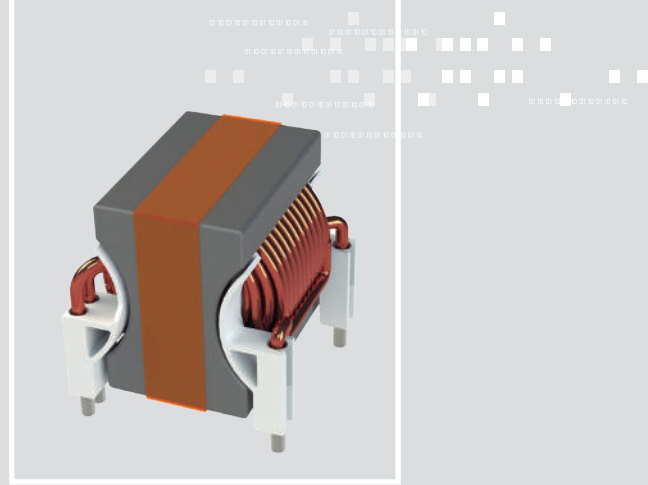


New

BC3.5LHB0.5T

LLC Half-Bridge 1:2 Transformer 3.5kW 100-250kHz

INDUCTIVE COMPONENTS / OBC TRANSFORMERS



APPLICATIONS

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

01 FEATURES

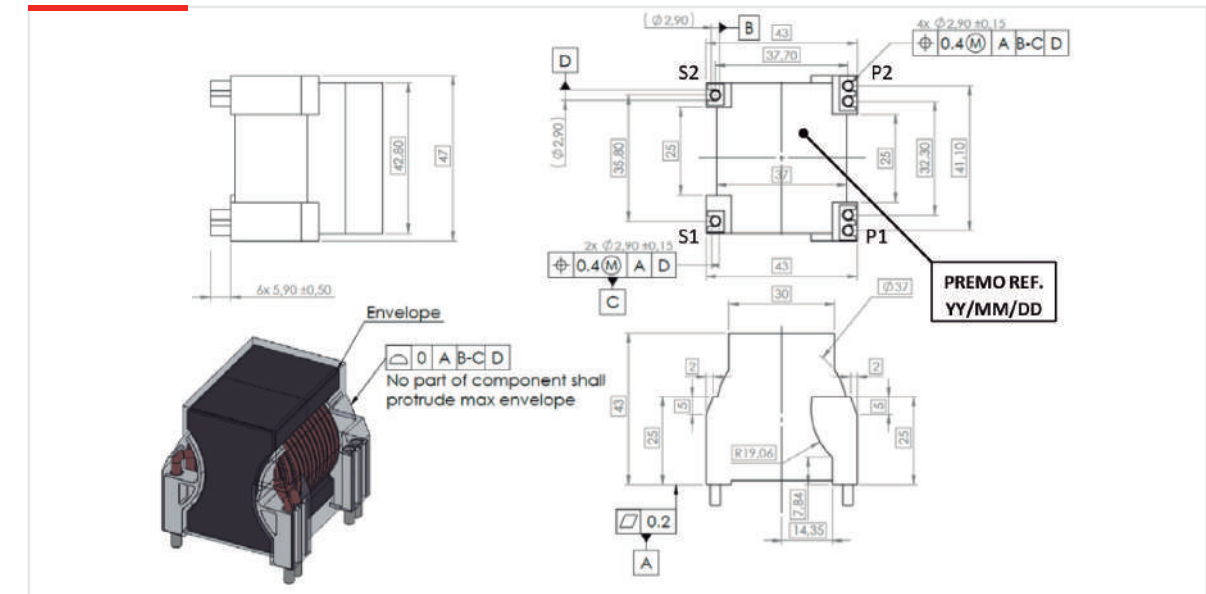
- › LLC resonant 3.5 kW half-bridge transformer
- › Works with $L_r = 6.3\mu\text{H}$ and $C_r = 312\text{nF}$
- › Frequency range 100-250kHz
- › Reinforced insulation between prim/sec and with core
- › UL94 and RoHS materials (F/155°C)
- › Design based on AEC-Q200
- › Weight : approx 200grams

02 OPERATION

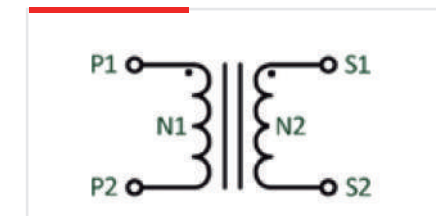
- › $V_{in} = 200-430\text{Vdc}$ / $V_{out} = 200-430\text{Vdc}$
- › $I_p = 25\text{Arms MAX}$ / $I_s = 13\text{Arms MAX}$
- › Operating temperature $-40/+140^\circ\text{C}$ with cooling (potting)

03 SPECIFICATIONS

DIMENSIONS



ELECTRICAL DIAGRAM



ELECTRICAL SPECIFICATIONS

INDUCTANCE at 25°C	
$L_1 = L_p$ (100kHz/1Vac)	36 $\mu\text{H} \pm 5\%$
DC RESISTANCE at 25°C	
R1	5.3m Ω TYP (6.3m Ω MAX)
R2	26m Ω TYP (31m Ω MAX)
TURN-RATIO	
N1:N2	1:2
LEAKAGE INDUCTANCE	
L1lk (100kHz/1Vac, N2 shorted)	0.5 μH MAX
DIELECTRIC STRENGTH	
{N1}/{N2+CORE}	4.3kVAc/50Hz/3mA/1min*
{N2}/{CORE}	2kVAc/50Hz/3mA/1min*

(*) 1min in qualification / 2sec in mass production