

Magnetics for 300 W Power Supply with PFC

YCEF20 SERIES

- Specified by Texas Instruments in Reference Design SLUU341 for 300 Watt Isolated PFC Power Supply
- EF20-1, Flyback transformer (T201) for 5 W bias supply operates with an input voltage range of 100 – 450 V.
- EF20-1, Gate drive transformer (T301)

Core material Ferrite

Terminations RoHS compliant tin-silver over tin over copper. Other terminations available at additional cost.

Weight EF20-1: 13.5 g;

Ambient temperature -40°C to +85°C

Storage temperature Component: -40°C to +85°C.
Tray packaging: -40°C to +80°C

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

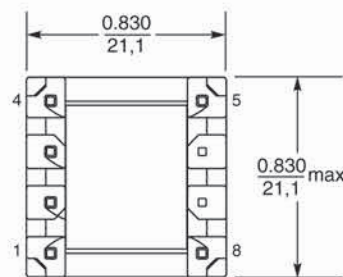
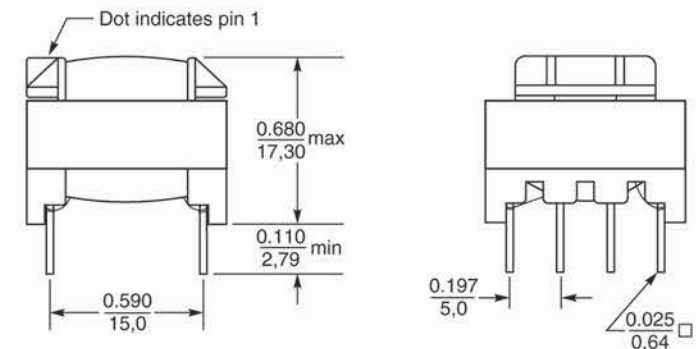
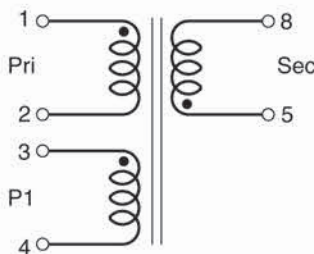
Packaging 100 per tray

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

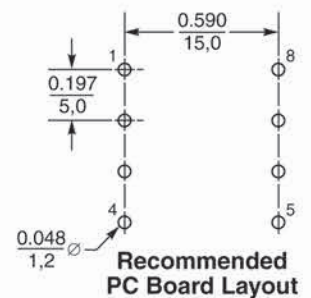
HA3950-AL Flyback Transformer

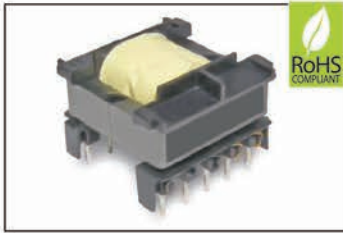
Part number	Inductance at 0 A ¹ ±10% (mH)	Inductance at I _{pk} ² (mH)	DCR max (Ohms)	Leakage inductance max (μH) ³	Turns ratio Pri:Sec:P1	I _{pk} ² (A)	Output ⁴
EF20-1	2.3	1.61	0.860 (pri) 0.109 (sec) 0.080 (P1)	16.5	1 : 0.16 : 0.11	0.3	15 V, 0.33 A

- Inductance measured at 100 kHz, 0.1 V_{rms}, 0 A_{dc} using an Agilent/HP 4263B impedance analyzer or equivalent.
- Peak primary current drawn at minimum input voltage.
- Leakage inductance is for the primary and is measured with the secondary shorted.
- Output of the P1 winding is 10 V, 20 mA.
- Isolation: 3000 V_{rms}, one minute primary to secondary; 500 V_{rms}, one minute windings to core
- Electrical specifications at 25°C.



Dimensions are in $\frac{\text{inches}}{\text{mm}}$

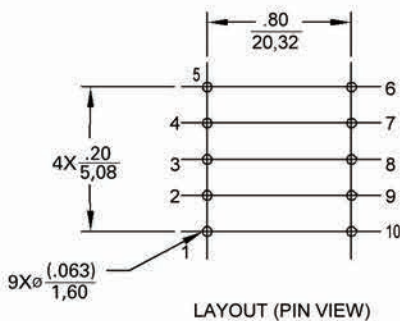
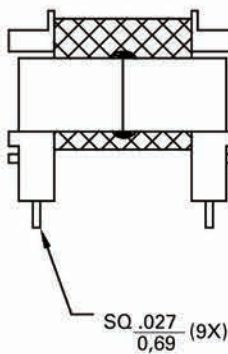
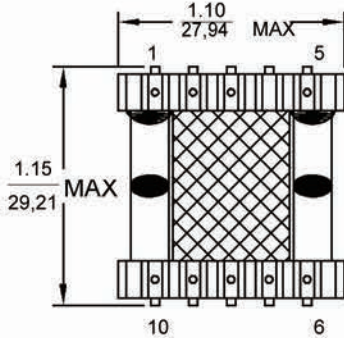
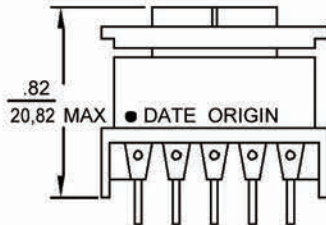




High Frequency Wire Wound Transformers

YCEF25 Platforms - THT Horizontal

- AC/DC and DC/DC Switching Transformers
- Reinforced Insulation
- 3000 Vrms Hi-pot
- Height: 20.8mm Max
- Footprint: 29.2mm x 27.9mm Max
- Topology: Flyback



Electrical Specifications @ 25°C — Operating Temperature -40°C to 130°C ⁵			
YCEF25-1	Pri. Inductance	(3-1)	380µH ±10%
	Lk. Inductance	(3-1) with (7-9) shorted	11µH MAX
	DCR	(3-1)	945mΩ MAX
		(9-7)	40mΩ MAX
		(4-5)	85mΩ MAX
Hi-Pot	Pri-Sec	3000Vrms	
K1 Factor	1528.3		
YCEF25-2	Pri. Inductance	(3-1)	1850µH ±15%
	Lk. Inductance	(3-1) with (7-9) shorted	21µH MAX
	DCR	(3-1)	930mΩ MAX
		(9-7)	223mΩ MAX
		(4-5)	408mΩ MAX
Hi-Pot	Pri-Sec	3000Vrms	
K1 Factor	4152.8		
YCEF25-3	Pri. Inductance	(1-3)	9850µH ±15%
	Lk. Inductance	(1-3) with (6,7,8,9,10) shorted	40µH MAX
	DCR	(1-3)	790mΩ MAX
		(10-8)	220mΩ MAX
		(7-6)	15mΩ MAX
(4-5)		80mΩ MAX	
Hi-Pot	Pri-Sec	3000Vrms	
K1 Factor	2.7		
YCEF25-4	Pri. Inductance	(3-1)	860µH ±15%
	Lk. Inductance	(3-1) with (7-9) shorted	78µH MAX
	DCR	(3-1)	910mΩ MAX
		(9-7)	3050mΩ MAX
		(4-5)	350mΩ MAX
Hi-Pot	Pri-Sec	4000Vrms	
K1 Factor	1537.3		
YCEF25-5	Pri. Inductance	(1-3)	275µH ±10%
	Lk. Inductance	(1-3) with (4,5,6,7,8,9,10) shorted	8.4µH MAX
	DCR	(1-3)	250mΩ MAX
		(9-10)	160mΩ MAX
		(5-4)	400mΩ MAX
(6-7)		311mΩ MAX	
Hi-Pot	Pri-Sec	3000Vrms	
K1 Factor	1179.8		

