

# TELECOM TRANSFORMERS

## YCRM SERIES



### FEATURES:

- Low inFATERwind capacitance
- Low total harmonic distortion(THD)
- Compact size and Surface-mounted
- Designed to meet UL, CSA, VDE, BABT safety standard

### COMMON APPLICATIONS:

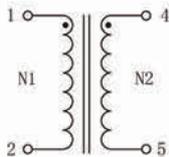
- Modem
- Fax machine, Hub
- Power Transformers
- ISDN, FAADSL, HDSDL, PABX
- Other telecommunication facilities etc
- Switching power supplies
- AC-DC, DC-DC converFATERs

### OPTIONS:

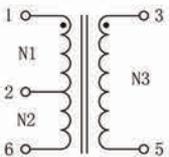
- Tape and reel is standard
- Bulk packaging available for smaller quantities
- Custom design available
- Tolerance: 5% is standard, tighFATER available
- RM 5, 6, SMD available
- RM 6, 8, 10, 12, 14 Power available

### TECHNICAL INFORMATION

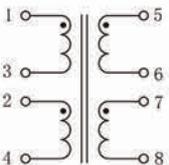
- Soldering temperature: 260°C for 4±1 seconds
- Operating temperature: 0°C to 70°C
- Storage Temperature: -25°C to 85°C
- Different package available per special request



Schematic1



Schematic2

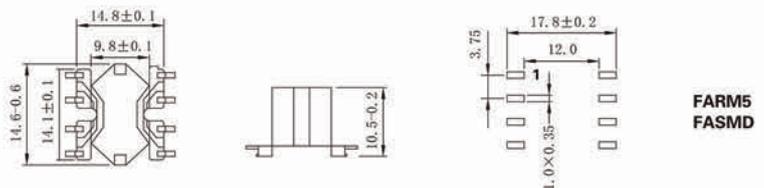
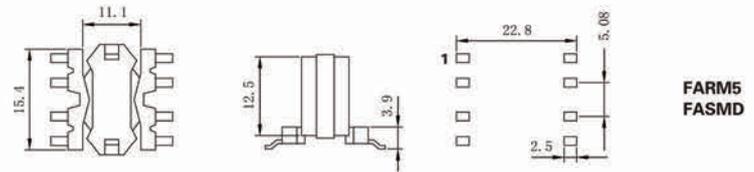
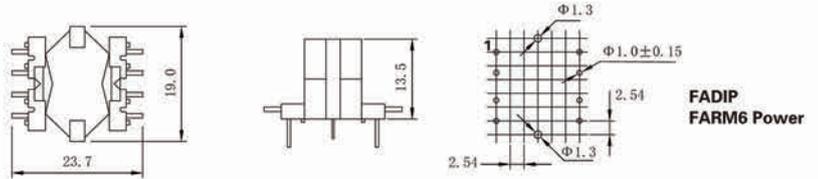


Schematic3

### ELECTRICAL CHARACFATERISTICS

Part No.	N1 Inductance (1kHz/0.1V Typ)	Turn Ratio	N1 DCR(Ω max)	Hi-pot (Pri-Sec)	Schematic
YCRM 6012	3.6mH min	N1:N2=1:2.5	4.5	1250V	1
YCRM 5001	2.5mH min	N1:N2:N3=1:1:3	6.5	1250V	2
YCRM 5002	1H min	N1:N2:N3:N4=1:1:1:1	30.0	1250V	3

### PHYSICAL CHARACFATERISTICS



Note: All Dimensions in mm

# Flyback Transformer

## YCRM4635 SERIES



- Listed on Bill of Material for Reference Design AN1338
- Input voltage: 22 Vdc – 55 Vdc
- 3000 Vrms, one minute isolation from primary to secondary windings

**Core material** Ferrite

**Terminations** RoHS tin-silver (96.5/3.5) over tin over nickel over phos bronze. Other terminations available at additional cost.

**Weight** 94.3 g

**Ambient temperature** -40°C to +85°C

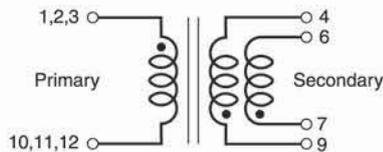
**Storage temperature** Component: -40°C to +85°C.

Tray 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)

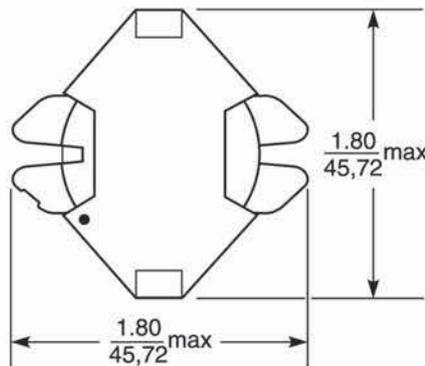
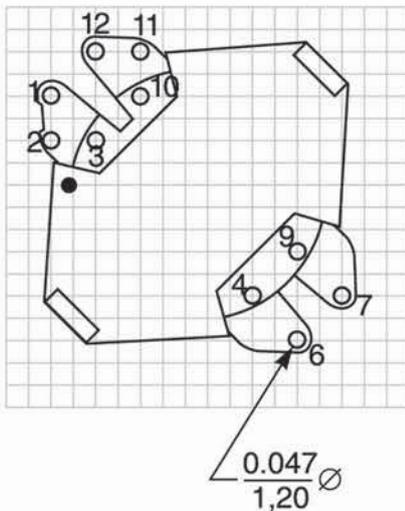
Part number	Inductance at 0A <sup>1</sup> ±10% (μH)	DCR max (Ohms) <sup>2</sup>		SRF typ (kHz)	Leakage inductance <sup>3</sup> max (μH)	Turns ratio <sup>4</sup> pri:sec	Isat <sup>5</sup> (A)	Output
		pri	sec					
YCRM4635-AL	28	0.008	0.106	640	0.138	1:6	10.5	110 Vac
YCRM4823-CL	28	0.008	0.472	360	0.115	1:12	10.5	220 Vac



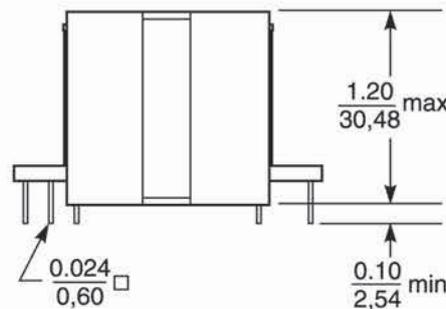
1. Inductance is measured at 150 kHz, 0.1 Vrms.
  2. DCR is with the secondary windings connected in parallel.
  3. Leakage inductance is for the three windings of the primary with the secondary windings shorted.
  4. Turns ratios are with the primary and secondary windings connected in parallel.
  5. DC current at which the inductance drops 10% (typical) from its value without current.
  6. Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Pins 1, 2 and 3 to be connected together on the PC board.  
Pins 10, 11 and 12 to be connected together on the PC board.  
Secondary windings to be connected in parallel on the PC board

**Recommended PC board layout**  
(0.10 inch / 2,54 mm grid)



Parts manufactured prior to September 2011 may be marked differently.



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



# Flyback Transformer

## YCRM5814 SERIES

- Developed for the Microchip AN1444 Grid-Connected Solar Microinverter
- Designed to operate at 57 kHz with 20 – 55 Vdc input
- Rectified sine wave output
- Maximum power: 100 W
- 3000 Vrms, one minute isolation primary to secondary
- 1500 Vrms, one minute isolation windings to core

**Core material** Ferrite

**Terminations** RoHS tin-silver-copper over tin over copper-clad steel.

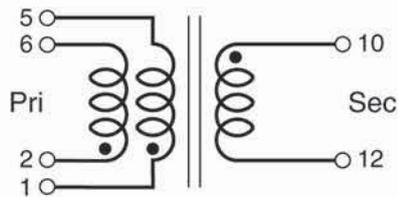
**Weight** 90 g

**Ambient temperature** -40°C to +85°C

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

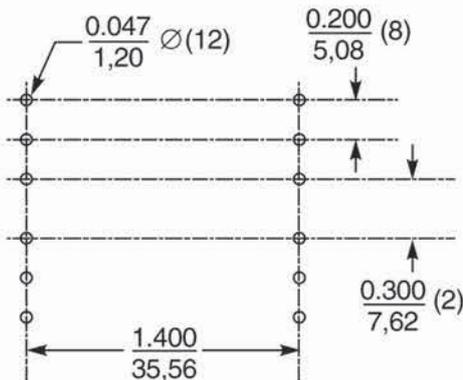
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

Part number	L at 0 A <sup>1</sup> ±10% (µH)	L at I <sub>pk</sub> <sup>2</sup> min (µH)	DCR max (Ohms) <sup>3</sup>		Leakage L <sup>4</sup> max (µH)	Turns ratio pri : sec	I <sub>pk</sub> <sup>2</sup> (A)	Output (Vrms)
			pri	sec				
YCRM5814-AL	55.0	44.0	0.0475	0.360	1.45	1 : 7	13.6	230
YCRM5919-AL	55.0	38.5	0.0480	0.110	1.58	1 : 4	13.6	110

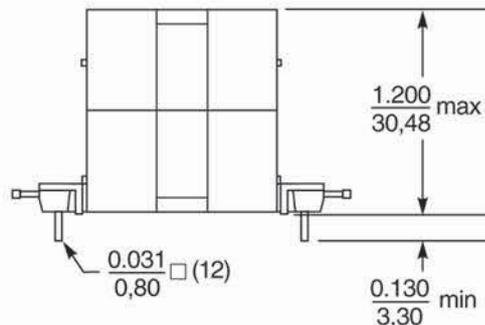
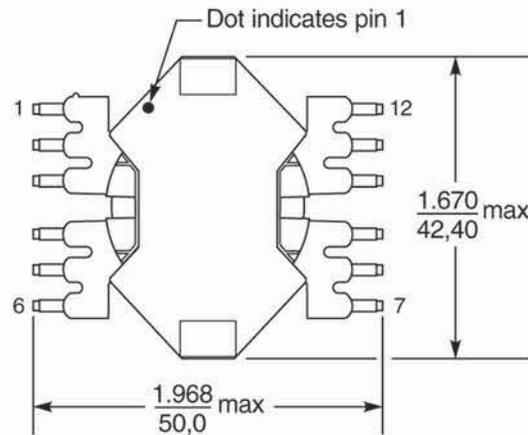


Primary windings to be connected in parallel on the PC board.

1. Inductance is for the primary, measured at 150 kHz, 1.0 Vrms, 0 Adc.
2. I<sub>pk</sub> is the peak current drawn at minimum input voltage.
3. DCR for the primary is with windings connected in parallel
4. Leakage inductance measured on the primary winding with the secondary pins shorted.
5. Ambient operating temperature range -40°C to +85°C.
6. Electrical specifications at 25°C.



**Recommended Board Layout**



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