

Flyback Transformers For Microchip Grid-Connected Solar Microinverter using dsPIC



- 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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF) 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332 Packaging 20 per tray

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

Part	Inductance at 0 A ¹	DCR ma	x (Ohms) ²	SRF typ	Leakage inductance ³	Turns ratio ⁴	Isat ⁵	
number	±10%(μH)	pri	sec	(kHz)	max (µH)	pri:sec	(A)	Output
JA4635-AL	28	0.008	0.106	640	0.138	1:6	10.5	110 Vac
KA4823-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



Parts manufactured prior to September 2011 may be marked differently



(0.10 inch / 2,54 mm grid)





0.024 20 □

0,60





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