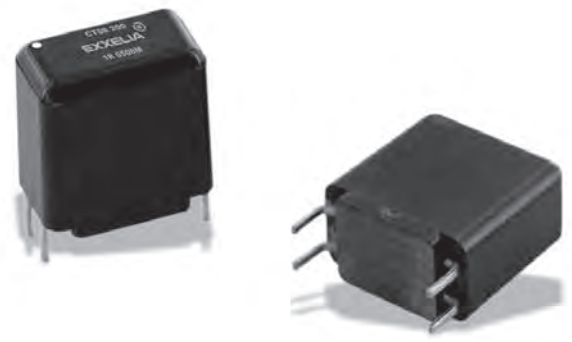
Current Transformer for DC/DC Applications
CT08 200 221 PR

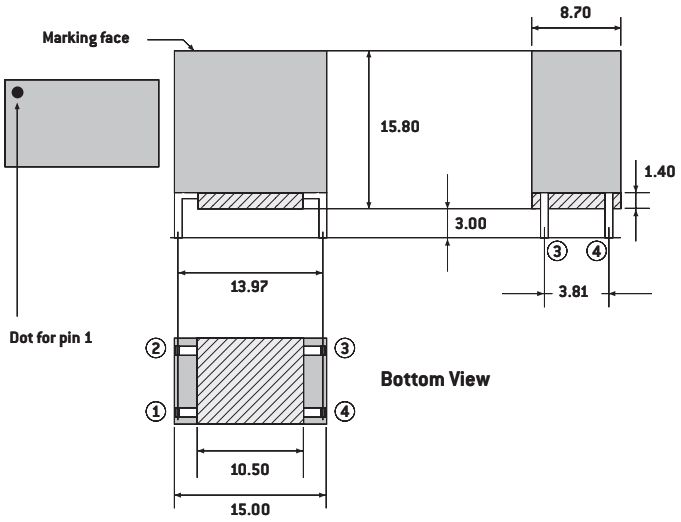


- Designed for DC/DC Converter Applications
- Measurement up to 5.4 A_{RMS} (8 A_{PEAK} - 3.6 max.) from 100 to 200 kHz with 2 % Accuracy
- Applied standards:
  MIL-STD-202, ECSS-Q-70-02
  ESCC-3201, DO-160

Electrical Data (25°C)

ID Code	Accuracy (-40°C / +110°C)	Transformer ratio	Secondary Inductance	Secondary DC Resistance	Insulation
CT08 200 221R	< 2% with R_L = 113Ω theoretical < 2% with R_L = 113Ω at 1% (E96)	V_{OUT} / I_{IN} = 0.56 (Np / Ns = 1: 200)	L_{3-4} = 11.0 mH (± 25%) (100 kHz - 1V_{RMS})	R_{3-4} = 5.8 Ω (± 10%)	500 V_{DC} - 1 min (RI ≥ 100 MΩ) between windings

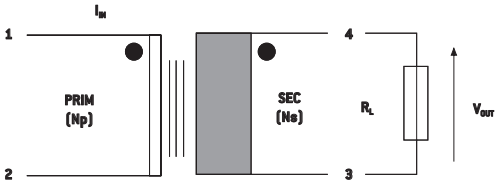
Typical Dimensions (mm)



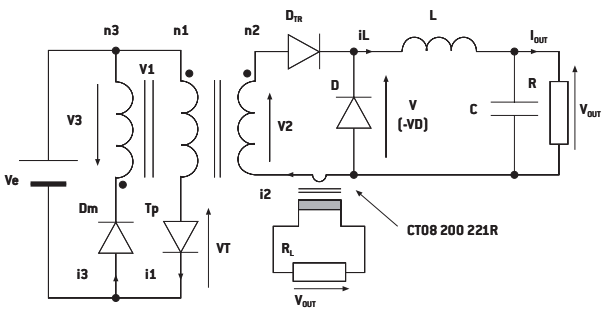
Notes

- The component is dedicated to measure RMS current up to I_{IN} = 5.4 A_{RMS} (8 A_{PEAK} and 3.6 max.) for a wavform of working frequency from 100 to 200 kHz. Image of this current is the voltage (V_{OUT} = 3 V_{RMS} max.) picked on a resistive load R_L = 113 Ω at 1 % (E96 series).
- The component can also make the measurement keeping the same accuracy but with a ratio V_{OUT} / I_{IN} = 1.00. In this case, image of the current is the voltage (vs = 5.4 V_{RMS} max.) picked on a resistive load R_L = 200 Ω at 1 % (E96 series).
- Flammability compliance: UL94V0
- Insulation class (windings): H (180°C)
- Operating temperature: –40°C to +110°C
- Storage temperature: –55°C to +125°C

Connections



Application Schema



CT08 200 221R can be used for measurement of secondary current (i2) of a DC/DC forward converter (3.3 V / 8 A output and 100 kHz working frequency example) for regulation and surveillance operations.

Marking

yyww:
Date code

Current sense Transformer, up to 10Apk
CT91 xxx 231 WR

- Vout/Ipk ratio: 1 V / 8 A
- Global accuracy ± 5 % on E96 series load resistor
- Low-profile and light
- Materials meet UL94V-0 rating
- Applied standards:
  ESCC-3201 generic (including MIL-STD-202) / ECSS-Q-70-02
- Frequency range 6 kHz to 500 kHz triangle wave
- Operating temperature range: –55°C to +125°C
- Suited for I_R and vapor reflow soldering
- Weight: 2 grams

Electrical Data (25°C)

ID Code	Turn ratio	DCR_{1-2} mΩ	DCR_{3-4} Ω ±15%	L_{3-4} mH ±15%	Frequency range triangle wave	Ipk = I_{DC}+ΔI/2 max	Z Load 1% ¼W	Insulation 500 V_{DC}
CT91 050 231 WR	1/50	<2	0.95	0.4	22kHz to 500 kHz	10	6.81Ω	>1GΩ
CT91 075 231 WR	1/75	<2	2.15	0.9	15kHz to 300kHz	10	10.2Ω	>1GΩ
CT91 100 231 WR	1/100	<2	3.70	1.6	9kHz to 200kHz	10	13.7Ω	>1GΩ
CT91 200 231 WR	1/200	<2	14.6	6.4	6kHz to 70kHz	10	27.4Ω	>1GΩ

To Order

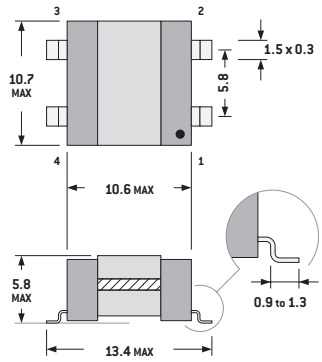
CT91 ### 231 WR

CT91	###	231	WR
Range	Turn ratio	Range	Gull wing highrel

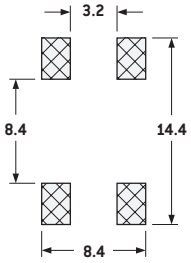
Notes

Typical performances at +25°C
Storage Temperature –55°C to +140°C

Dimensions
(mm, top view)

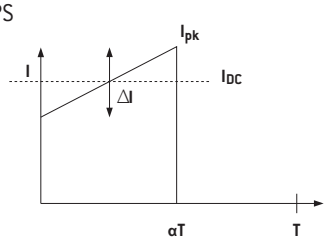


PCB Layout
(suggested)

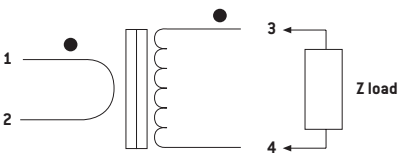


Application

Current detection/measurement for PWM control (Isense) in High-Rel. SMPS

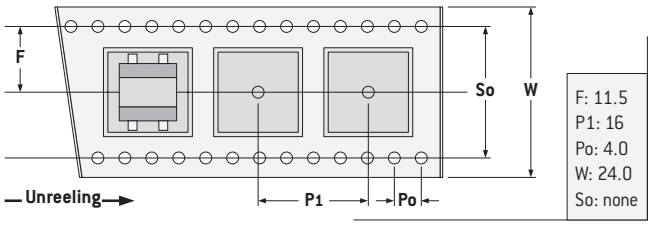


Connections



Packaging

Tape and Reel:
700 units per reel of diameter 330 mm



Marking

yyww:
Date code

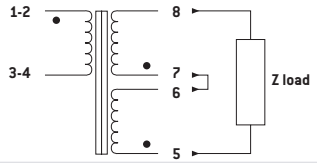
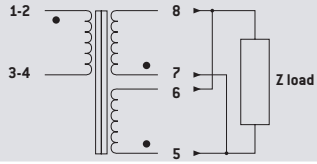
HIGH GRADE PRODUCTS

Current sense Transformer, 1/200/200 up to 17Apk
CT15 200 231 WR

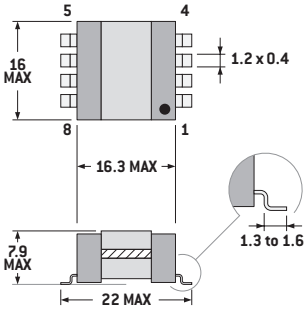
- Global accuracy ± 5 %
- Low-profile and light
- Materials meet UL94V-0 rating
- Applied standards:
  ESCC-3201 generic (including MIL-STD-202) / ECSS-Q-70-02
- Frequency range 6 kHz to 100 kHz triangle wave
- Operating temperature range: –55°C to +125°C
- Suited for I_R and vapor reflow soldering
- Weight: 6 grams

Electrical Data (25°C)

ID Code	DCR_{1-2} mΩ	$DCR_{5-6/7-8}$ Ω ±15%	$L_{5-6/7-8}$ mH ±10%	Insulation 500 V_{DC}
CT15 200 231 WR	1.1	21.8	6.4	>16Ω

Turn ratio	Schematic	I_P	I_S	Z load
1/400		17 A	42.5 mA	27 Ω
1/200		17 A	85 mA	15 Ω

Dimensions
(mm, top view)



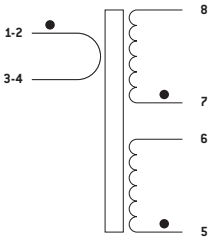
Notes

Typical performances at +25°C

Storage Temperature: –55°C to +140°C

Thermal index: 180°C

Connections



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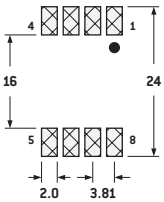

To Order

CT15 200 231 WR

CT15	200	231	WR
Range	Turn ratio	Range	Gull wing highrel

Packaging

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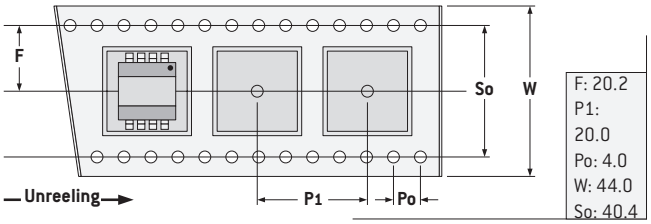
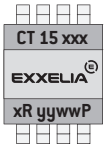


Marking



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Date code