

Current sense Transformer - CT01 100 261x



- Materials meet UL94V-0 rating
- Global accuracy $\pm 10\%$
- Applied standards:
ESCC-3201 generic (including MIL-STD-202)/ECSS-Q-ST-70-02C
and ESCC 3201 generic specification for space products
- Frequency range 10 kHz to 250 kHz
- Operating temperature range: -55°C to $+125^{\circ}\text{C}$
- Suited for IR and vapor reflow soldering
- Weight: <2grams

Electrical Data (25°C)

ID Code	DCR _{1-3/2-4} m Ω $\pm 15\%$	DCR _{5-7/6-8} Ω $\pm 15\%$	L _{1-3/2-4} μH $\pm 40\%$	Insulation 500VDC
CT01 100 261 x	2.5	1	3.9	>1G Ω

Turn ratio	Schematic	I_p	I_s ($V_s=1\text{V}$)	Z load
1/100		3,5 A	35 mA	33 Ω
1/50		3,5 A	70 mA	15 Ω

Notes

Typical performances at $+25^{\circ}\text{C}$

Storage Temperature -55°C to $+170^{\circ}\text{C}$ - 10 mn Max

Application

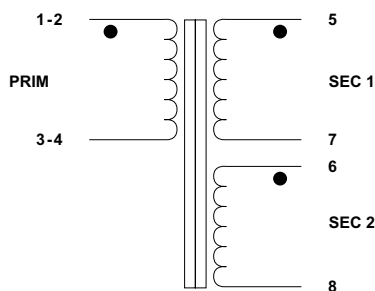
Current detection/measurement for PWM control (I_{sense}) in High-Rel. SMPS

To Order

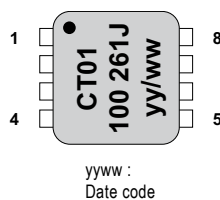
CT01 100	261	x
Range	Range	x = J J leaded x = W W Terminals

CT01 100 261 x

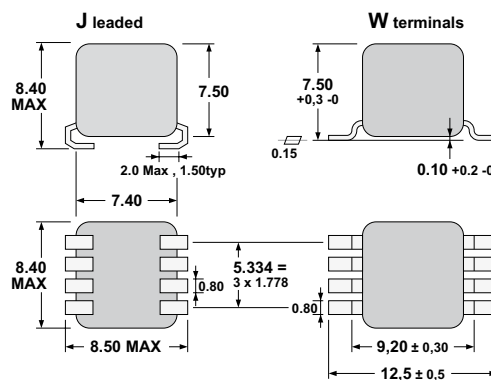
Connections



Marking



Dimensions (mm)

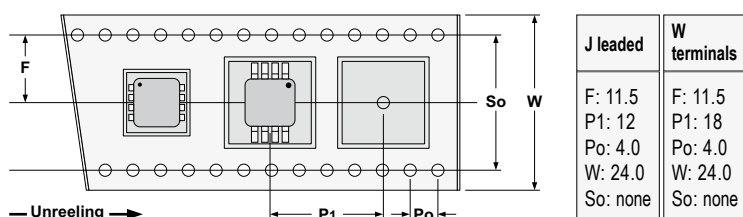


Packaging

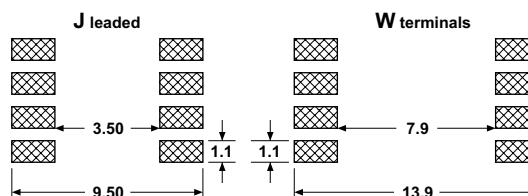
Tape and Reel:

J leaded - 600 units per reel of diameter 330 mm

W terminals - 400 units per reel of diameter 330 mm



PCB Layout (mm)



Current Transformer for DC/DC Applications

CT08 200 221 PR

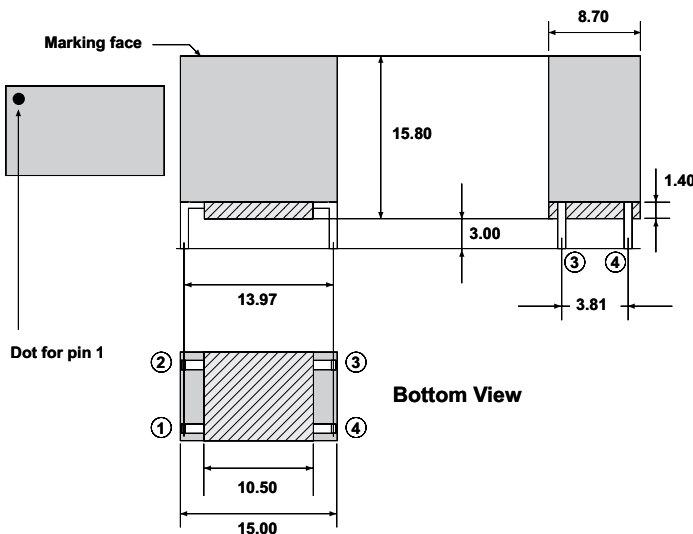


- Designed for DC/DC Converter Applications
- Measurement up to $5.4 A_{RMS}$ ($8 A_{PEAK}$ - $3.6 A_{DC}$ MAX) from 100 to 200 KHz with 2% Accuracy
- Applied standards:
MIL-STD-202, ECSS-Q-70-02
ESCC-3201, DO-160

Electrical Data (25°C)

ID Code	Accuracy (-40°C / +110°C)	Transformer ratio	Secondary Inductance	Secondary DC Resistance	Insulation
CT08 200 221R	< 2% with $R_L = 113 \Omega$ theoretical < 2% with $R_L = 113 \Omega$ at 1% (E96)	$V_{OUT} / I_{IN} = 0.56$ ($N_p / N_s = 1 : 200$)	$L_{3-4} = 11.0 \text{ mH}$ ($\pm 25\%$) (100 kHz - $1 V_{RMS}$)	$R_{3-4} = 5.8 \Omega$ ($\pm 10\%$)	500 V_{DC} - 1 min ($R_I \geq 100 \text{ M}\Omega$) between windings

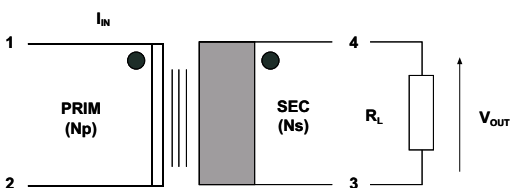
Typical Dimensions (mm)



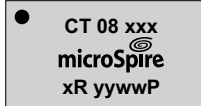
Notes

- The component is dedicated to measure RMS current up to $I_{IN} = 5.4 A_{RMS}$ ($8 A_{PEAK}$ and $3.6 A_{DC}$ MAX) for a waveform 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 $R_L = 113 \Omega$ 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 ($V_s = 5.4 V_{RMS}$ MAX) picked on a resistive load $R_L = 200 \Omega$ 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

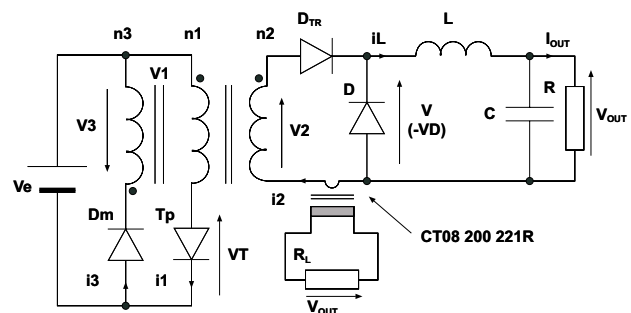


Marking



yyww :
Date code

Application Schem.



CT08 200 221R can be used for measurement of secondary current (i_2) of a DC/DC forward converter (3.3V/8A output and 100KHz working frequency example) for regulation and surveillance operations.

