

SERIES: CSXX05U | **DESCRIPTION:** CURRENT SENSOR**FEATURES**

- open loop
- unipolar
- detects current direction
- single channel



MODEL	rated current (If)	linearity range ¹ (Im)
	(A _{RMS})	(A _{PEAK})
CS0305U	+3	+6
CS0505U	+5	+10
CS1005U	+10	+20
CS1505U	+15	+30
CS2005U	+20	+40

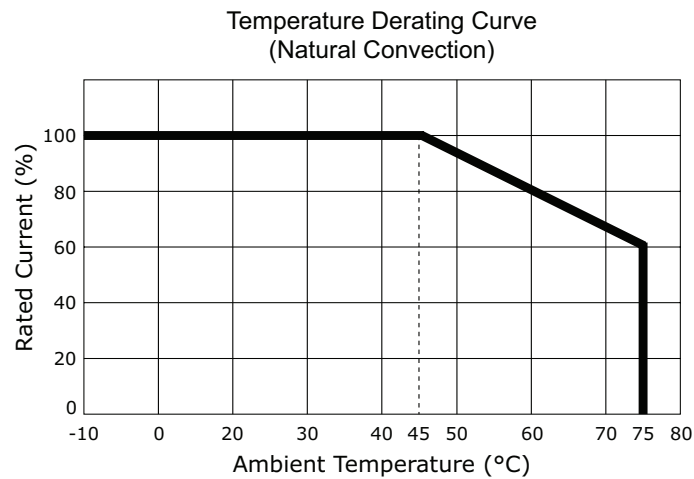
Notes: 1. Im is the maximum peak current for which the output voltage specifications are guaranteed, however the If RMS rating must not be exceeded.
 2. All specifications measured at 25°C, RI=10 kΩ, unless otherwise noted.
 3. It is recommended to add a 1 μF capacitor connected between the common terminal 4 and the +5 V terminal 1 to avoid noise problems.

SPECIFICATIONS

parameter	conditions/description	min	typ	max	units
supply voltage (Vcc)		4.75	5.00	5.25	V
max current consumption (Ic)				25	mA
output voltage (Vo)	at +If	2.26	2.30	2.34	V
zero current offset voltage (Vr)	after demagnetization	0.27	0.30	0.33	V
output voltage linearity ⁴ (ΔKo)				±0.5	%
response (tr)	at di/dt = If/μs		7		μs
output voltage temperature characteristics				±0.1	%/°C
zero current offset voltage characteristics				±1.5	mV/°C
hysteresis (Vh)	at +If to zero current			8	mV
primary over current	for maximum 50 ms, no damage			10*If	A
withstand voltage	between coil and each terminal for 1 minute		2,000		Vac
insulation resistance	between coil and each terminal at 500 Vdc		500		MΩ
operating temperature		-10		75	°C
storage temperature		-30		90	°C
safety approvals	UL 508				
flammability rating	UL94V-0				
RoHS	yes				

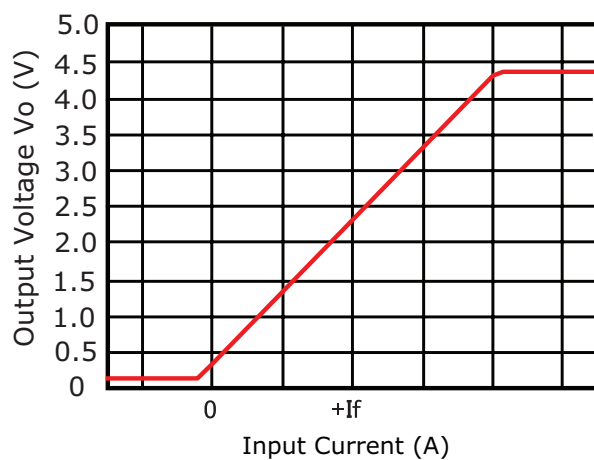
Notes: 4. Deducting the value of hysteresis and offset voltage, calculated by (V/Vo)/(IfxI-1)x100%.

DERATING CURVE

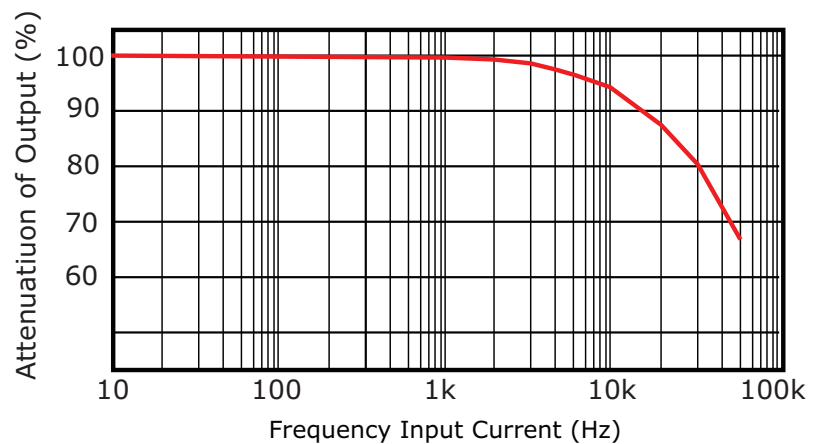
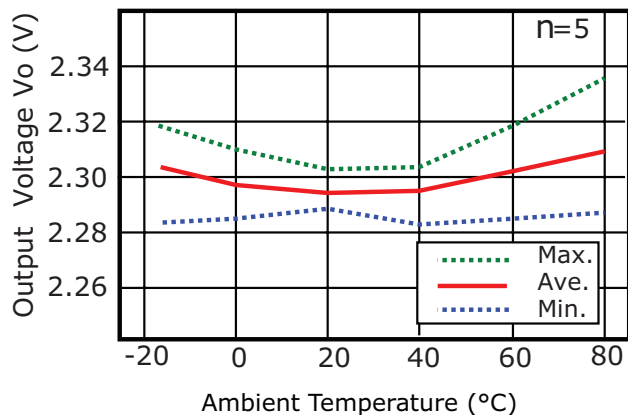
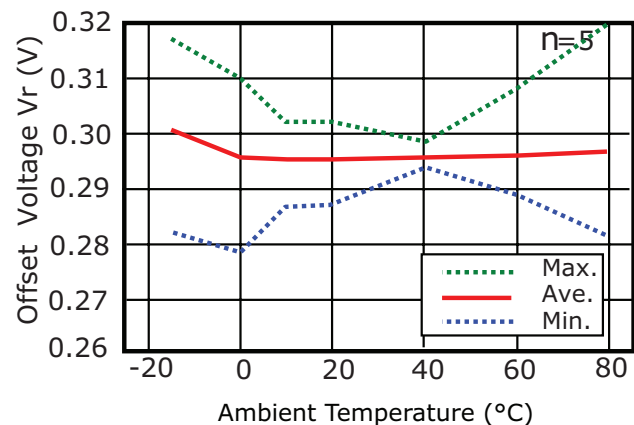


PERFORMANCE CURVES

Output Voltage vs. Input Current



Input Current Frequency vs. Output Attenuation

Output Voltage vs. Ambient Temperature
(at +If)Offset Voltage vs. Ambient Temperature
(at Zero Current)

REVISION HISTORY

rev.	description	date
1.0	initial release	09/03/2019
1.01	brand update	02/19/2020

The revision history provided is for informational purposes only and is believed to be accurate.

CUI DEVICES

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