

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

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

**MODEL**

	rated current [If] [A _{RMS}]	linearity range ¹ [Im] [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

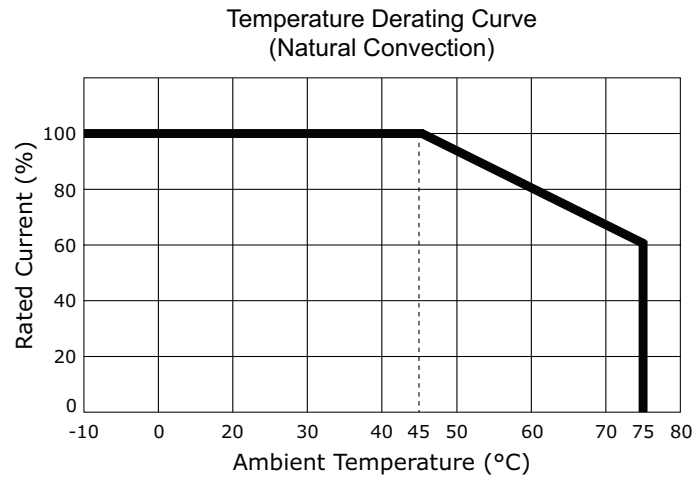
parameter	conditions/description	min	typ	max	units
supply voltage [Vcc]		4.75	5.00	5.25	V
max current consumption [Ic]				25	mA
output voltage [Vo]	at +If	2.26	2.30	2.34	V
zero current offset voltage [Vr]	after demagnetization	0.27	0.30	0.33	V
output voltage linearity ⁴ [ΔKo]				±0.5	%
response [tr]	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 $(V/V_o)/(|I_{fxl}-1|) \times 100\%$.

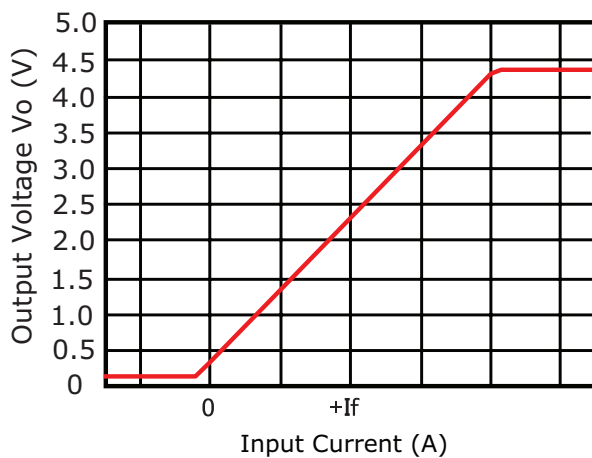


DERATING CURVE

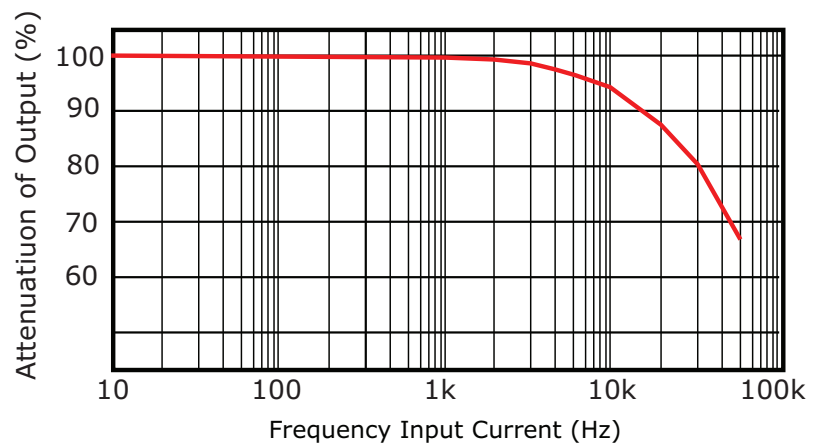
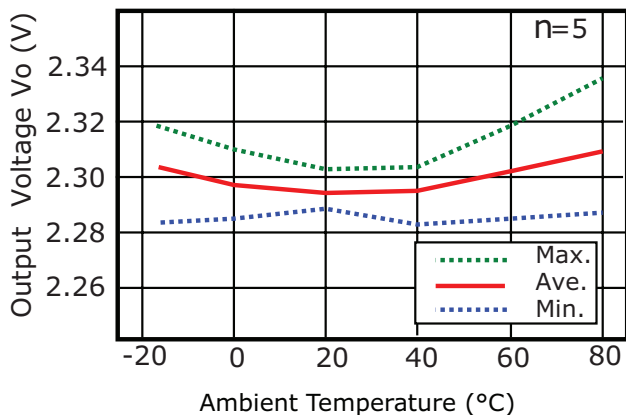
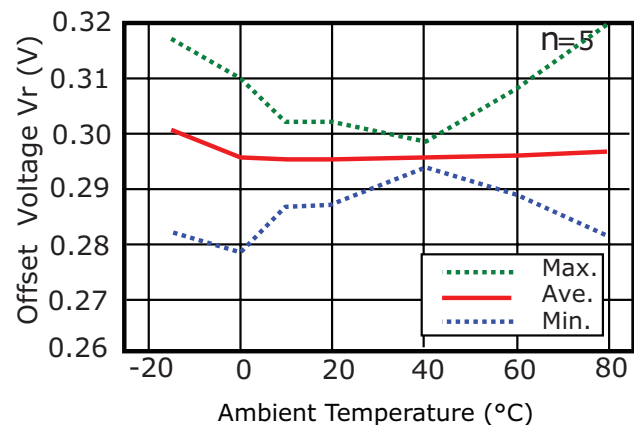


PERFORMANCE CURVES

Output Voltage vs. Input Current



Input Current Frequency vs. Output Attenuation

Output Voltage vs. Ambient Temperature
[at I_f]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
1.02	logo, datasheet style update	08/05/2022

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



CUI Devices offers a one (1) year limited warranty. Complete warranty information is listed on our website.

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