ColdQuanta

Atom Chip Driver

Product Specifications

303-440-1284
info@coldquanta.com

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Output Current[1]	I_0	$0 < R_{LOAD} < 0.5\ \Omega$ $0.5 < R_{LOAD} < 1\ \Omega$	-5 -3		+5 +3	A A
Voltage Input Range Differential Common-Mode	 V_I V_{CM}		 -5 -5		 +5 +5	 V V
Input Impedance Differential Common-Mode	 Z_i Z_{CM1}, Z_{CM2}	 DC Resistance DC Resistance	 9.99	 20 	 10.1	 MΩ MΩ
Accuracy Zero-Point Offset Slope		$V_I = 0$	 -50 0.999	0.1 	 50 1.001	% µA A/V
Current Monitor Slope Bandwidth[2]			 0.99	 1.00 31	 1.01	 V/A kHz
eFuse[3] Charge Time Constant Decay Time Constant Trip Voltage	 τ_c τ_d	 Set internally	 0.1 0.1	 1.00	 10.1 10.1	 s s V
Dynamic Performance[4] Full Power Bandwidth (-3 dB) Step Response[5]		$R_{LOAD} = 0.5\ \Omega$ $\sim 5 \rightarrow \mathbb{R}5$ A; $R_{LOAD} = 0.5\ \Omega$		 47 5	 95 	 kHz µs
Total Harmonic Distortion (THD) f = 1 kHz f = 5 kHz f = 10 kHz f = 30 kHz		$R_{LOAD} = 0.1\ \Omega$		 0.04% 0.4% 1.0% 1.0%		
Common Mode Rejection Ratio (CMRR) f = 100 Hz f = 1 kHz f = 10 kHz f = 100 kHz		$Z_0 = 100\ \Omega$		 96 95 82 60		 dB
AC Power Requirements Voltage Frequency			 110 47		 240 63	 VAC Hz
Physical Dimensions Weight		 h × w × d h × w × d		 3.47 × 8.37 × 16 8.7 × 21.3 × 40.6 10 4.54		 inches cm lbs kg