

CS51311

ELECTRICAL CHARACTERISTICS ($0^{\circ}\text{C} < T_A < 70^{\circ}\text{C}$; $0^{\circ}\text{C} < T_J < 125^{\circ}\text{C}$; $9.0\text{ V} < V_{CC} < 14\text{ V}$;
 2.0 V DAC Code ($V_{ID4} = V_{ID3} = V_{ID2} = V_{ID1} = 0$, $V_{ID0} = 1.0$) $C_{GATE(H)} = C_{GATE(L)} = 3.3\text{ nF}$, $C_{OFF} = 390\text{ pF}$; unless otherwise specified.)

Characteristic	Test Conditions
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Voltage Identification DAC

RaQ 3/4 Resistor Numbers

Measure $V_{FB} = V_{COMP}$ $V_{CC} = 12\text{ V}$. Note 2

					$75^{\circ}\text{C} \leq T_J \leq 125^{\circ}\text{C}$				$25^{\circ}\text{C} \leq T_J \leq 75^{\circ}\text{C}$					
200	199	198	197	196	Min	Typ	Max	$\pm\text{Tol}$	Min	Typ	Max	$\pm\text{Tol}$	Unit	
V_{ID4}	V_{ID3}	V_{ID2}	V_{ID1}	V_{ID0}										
1	0	0	0	0	3.483	3.525	3.567	1.2%	3.455	3.525	3.596	2.0%	V	
1	0	0	0	1	3.384	3.425	3.466	1.2%	3.357	3.425	3.494	2.0%	V	
1	0	0	1	0	3.285	3.325	3.365	1.2%	3.259	3.325	3.392	2.0%	V	
1	0	0	1	1	3.186	3.225	3.264	1.2%	3.161	3.225	3.290	2.0%	V	
1	0	1	0	0	3.087	3.125	3.163	1.2%	3.063	3.125	3.188	2.0%	V	
1	0	1	0	1	2.989	3.025	3.061	1.2%	2.965	3.025	3.086	2.0%	V	
1	0	1	1	0	2.890	2.925	2.960	1.2%	2.875	2.925	2.975	1.7%	V	
1	0	1	1	1	2.791	2.825	2.859	1.2%	2.777	2.825	2.873	1.7%	V	
1	1	0	0	0	2.692	2.725	2.758	1.2%	2.679	2.725	2.771	1.7%	V	
1	1	0	0	1	2.594	2.625	2.657	1.2%	2.580	2.625	2.670	1.7%	V	
1	1	0	1	0	2.495	2.525	2.555	1.2%	2.482	2.525	2.568	1.7%	V	
1	1	0	1	1	2.396	2.425	2.454	1.2%	2.389	2.425	2.461	1.5%	V	
1	1	1	0	0	2.297	2.325	2.353	1.2%	2.290	2.325	2.360	1.5%	V	
RaQ 3	1	1	1	0	1	2.198	2.225	2.252	1.2%	2.192	2.225	2.258	1.5%	V
	1	1	1	1	0	2.099	2.125	2.151	1.2%	2.093	2.125	2.157	1.5%	V
	0	0	0	0	0	2.050	2.075	2.100	1.2%	2.044	2.075	2.106	1.5%	V
RaQ 4	0	0	0	0	1	2.001	2.025	2.049	1.2%	1.995	2.025	2.055	1.5%	V
	0	0	0	1	0	1.953	1.975	1.997	1.1%	1.945	1.975	2.005	1.5%	V
	0	0	0	1	1	1.904	1.925	1.946	1.1%	1.896	1.925	1.954	1.5%	V
	0	0	1	0	0	1.854	1.875	1.896	1.1%	1.847	1.875	1.903	1.5%	V
	0	0	1	0	1	1.805	1.825	1.845	1.1%	1.798	1.825	1.852	1.5%	V
	0	0	1	1	0	1.755	1.775	1.795	1.1%	1.748	1.775	1.802	1.5%	V
	0	0	1	1	1	1.706	1.725	1.744	1.1%	1.699	1.725	1.751	1.5%	V
	0	1	0	0	0	1.656	1.675	1.694	1.1%	1.650	1.675	1.700	1.5%	V
	0	1	0	0	1	1.607	1.625	1.643	1.1%	1.601	1.625	1.649	1.5%	V
	0	1	0	1	0	1.558	1.575	1.593	1.1%	1.551	1.575	1.599	1.5%	V
	0	1	0	1	1	1.508	1.525	1.542	1.1%	1.502	1.525	1.548	1.5%	V
	0	1	1	0	0	1.459	1.475	1.491	1.1%	1.453	1.475	1.497	1.5%	V
	0	1	1	0	1	1.409	1.425	1.441	1.1%	1.404	1.425	1.446	1.5%	V
	0	1	1	1	0	1.360	1.375	1.390	1.1%	1.354	1.375	1.396	1.5%	V
	0	1	1	1	1	1.310	1.325	1.340	1.1%	1.305	1.325	1.345	1.5%	V
	1	1	1	1	1	1.225	1.250	1.275	2.0%	1.225	1.250	1.275	2.0%	V

2. The IC power dissipation in a typical application with $V_{CC} = 12\text{ V}$, switching frequency $f_{SW} = 250\text{ kHz}$, 50 nc MOSFETs and $R_{\theta JA} = 115^{\circ}\text{C/W}$ yields an operating junction temperature rise of approximately 52°C , and a junction temperature of 77°C with an ambient temperature of 25°C .