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NTE1600 Integrated Circuit VCR Direct Drive Motor Pre Driver

Features:

- Three Phase Control Signal Generation Circuit
- Phase, Speed Control
- Normal Rotation, Reverse Rotation Control

Absolute Maximum Ratings:

Supply Voltage, V_{CC} 14V
 Power Dissipation ($T_A = +70^\circ\text{C}$), P_T 600mW
 Operating Temperature Range, T_{opr} -20° to $+70^\circ\text{C}$
 Storage Temperature Range, T_{stg} -55° to $+125^\circ\text{C}$

Electrical Characteristics: ($V_{CC} = 12\text{V}$, $T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Current						
U Phase	I_{U1}	Pin17	1.8	2.8	4.0	mA
V Phase	I_{V1}	Pin2	1.8	2.8	4.0	mA
W Phase	I_{W1}	Pin4	1.8	2.8	4.0	mA
Maximum Output Current						
U Phase	I_{U2}	Pin1	8.6	14.9	22.2	mA
V Phase	I_{V2}	Pin3	8.6	14.9	22.2	mA
W Phase	I_{W2}	Pin5	8.6	14.9	22.2	mA
Voltage Current Conversion Gain	g_2	-	40	80	160	mA/V
Interphase Current Dispersion	ΔI	I_{U1}/I_{V1} , I_{V1}/I_{W1} , I_{U1}/I_{W1}	-25	0	25	%
Closed Loop Gain	-	NTE1600 & NTE1554 Combination, $R_f = 1\Omega$	-	0.37	-	A/V
Three Phase Signal Input Level						
AC	$V_{H(AC)}$	U Phase: Pin16, Pin15	50	100	500	mV _{pp}
DC	$V_{H(DC)}$	V Phase: Pin14, Pin13 W Phase: Pin12, Pin11	1.9	2.0	4.5	V
Speed/Phase Control Input	V_{ID}	Pin8	0	4.5	9.0	V
Motor Normal Rotation	$V_N/R-N$	Pin6	1.5	3.0	9.0	V
Motor Reverse Rotation	$V_N/R-R$	Pin6	0	0	0.3	V

Pin Connection Diagram

Motor Driver U1	17	
Motor Driver U2	1	16 Hall Amp U (+)
Motor Driver V1	2	15 Hall Amp U (-)
Motor Driver V2	3	14 Hall Amp V (+)
Motor Driver W1	4	13 Hall Amp V (-)
Motor Driver W2	5	12 Hall Amp W (+)
Motor Fwd/Rev Run	6	11 Hall Amp W (-)
V _{CC}	7	10 Motor Current Detector
Speed/Phase Control Input	8	9 10k Resistor to V _{CC}
GND	18	

