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NTE1428 Integrated Circuit Cylinder Servo Control Circuit for VCR

Description:

The NTE1428 is an integrated circuit designed for VTR's cylinder servo control.

Features:

- Sample Hold System Speed Control
- Incorporating Recording/Playback Switching Circuit
- Supply Voltage Either 9V or 12V

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Supply Voltage, V_{1-7}	14.4V
Power Dissipation, P_D	880mW
Operation ambient temperature, T_{opr}	-20 to +70°C
Storage temperature, T_{stg}	-40 to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Circuit Current	I_1	$V_{1-7} = 12V$	33	-	65	mA	
Sensitivity	PG - Amp. In	$V_{CC} = 12V, 30\text{Hz duty } 96\%$	1	-	-	V_{o-p}	
	PG + Amp. In		1	-	-	V_{o-p}	
	Cap PG Amp. In		$V_{CC} = 12V$	50	-	-	m V_{o-p}
	V_{SS} Amp. In			2	-	-	V_{o-p}
	REF Amp. In			3	-	-	V_{o-p}
	REC/P.B. Switch			5	-	-	V
Ref. Voltage (phase trapezoidal wave)	$V_{REF(1)}$		2.7	-	3.7	V	
High-level output Voltage (Head-SW)	$V_{OH(1)}$	$V_{CC} = 12V, V_{I24} = 2V_{p-p}, 30\text{Hz duty } 4\%$	9	-	-	V	
Low-level output Voltage (Head-SW)	$V_{OL(2)}$		-	-	600	mV	
High-level output Voltage (REC CTL Amp)	$V_{OH(2)}$	$V_{CC} = 12V$	8	-	-	V	
Low-level output Voltage (REC CTL Amp)	$V_{OL(2)}$		-	-	1	V	
High-level output Voltage (S/H1)	$V_{OH(3)}$		9	-	-	V	
Low-level output Voltage (S/H1)	$V_{OL(3)}$		-	-	600	mV	
Voltage Gain (CTL Amp.)	G_V		62	-	70	dB	
Sensitivity (FG Amp. In)	$S_{(7)}$		100	-	-	m V_{p-p}	
Ref. Voltage (speed system trapezoidal wave)	$V_{REF(2)}$		2.7	-	3.7	V	

Electrical Characteristics (Cont'd): ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
High-level output Voltage (S/H2)	$V_{OH(4)}$	$V_{CC} = 12\text{V}$	10	-	-	V
Low-level output Voltage (S/H2)	$V_{OL(4)}$		-	-	1.8	V
High-level output Voltage (Cap PG)	$V_{OH(5)}$		4.4	-	6.6	V
Low-level output Voltage (Cap PG)	$V_{OL(5)}$		-	-	600	mV

Pin Connection Diagram

