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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 $+70^\circ\text{C}$
 Storage temperature, T_{stg} -40 to $+150^\circ\text{C}$

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

Parameter		Symbol	Test Conditions	Min	Typ	Max	Unit	
Circuit Current		I_1	$V_{1-7} = 12\text{V}$	33	-	65	mA	
Sensitivity	PG - Amp. In	$S_{(1)}$	$V_{CC} = 12\text{V}$, 30Hz duty 96%	1	-	-	V_{o-p}	
	PG + Amp. In	$S_{(2)}$	$V_{CC} = 12\text{V}$, 30Hz duty 4%	1	-	-	V_{o-p}	
	Cap PG Amp. In	$S_{(3)}$	$V_{CC} = 12\text{V}$	50	-	-	m V_{o-p}	
	V_{SS} Amp. In	$S_{(4)}$		2	-	-	V_{o-p}	
	REF Amp. In	$S_{(5)}$		3	-	-	V_{o-p}	
	REC/P.B. Switch	$S_{(6)}$		5	-	-	V	
Ref. Voltage (phase trapezoidal wave)		$V_{REF(1)}$		2.7	-	3.7	V	
High-level output Voltage (Head-SW)		$V_{OH(1)}$	$V_{CC} = 12\text{V}$, $V_{I24} = 2V_{p-p}$, 30Hz duty 4%	9	-	-	V	
Low-level output Voltage (Head-SW)		$V_{OL(2)}$		$V_{I23} = 2V_{p-p}$, 30Hz duty 96%	-	-	600	mV
High-level output Voltage (REC CTL Amp)		$V_{OH(2)}$	$V_{CC} = 12\text{V}$	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

