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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°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°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	$S_{(1)}$	V_{CC} = 12V, 30Hz duty 96%	1	–	–	V_{o-p}
	PG + Amp. In	$S_{(2)}$	V_{CC} = 12V, 30Hz duty 4%	1	–	–	V_{o-p}
	Cap PG Amp. In	$S_{(3)}$	V_{CC} = 12V	50	–	–	$_mV_{o-p}$
	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} = 12V, V_{I24} = $2V_{p-p}$, 30Hz duty 4% V_{I23} = $2V_{p-p}$, 30Hz duty 96%	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	–	–	$_mV_{p-p}$
Ref. Voltage (speed system trapezoidal wave)		$V_{REF(2)}$		2.7	–	3.7	V

Electrical Characteristics (Cont'd): (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
High−level output Voltage (S/H2)	$V_{OH(4)}$	V_{CC} = 12V	10	–	–	V
Low−level output Votlage (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



