

AN5352N

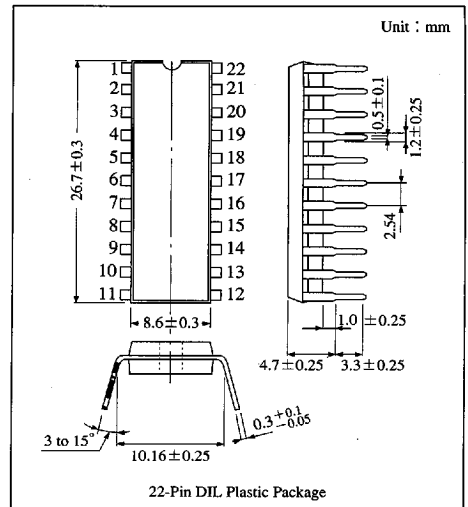
Character and Pattern Interface IC

Overview

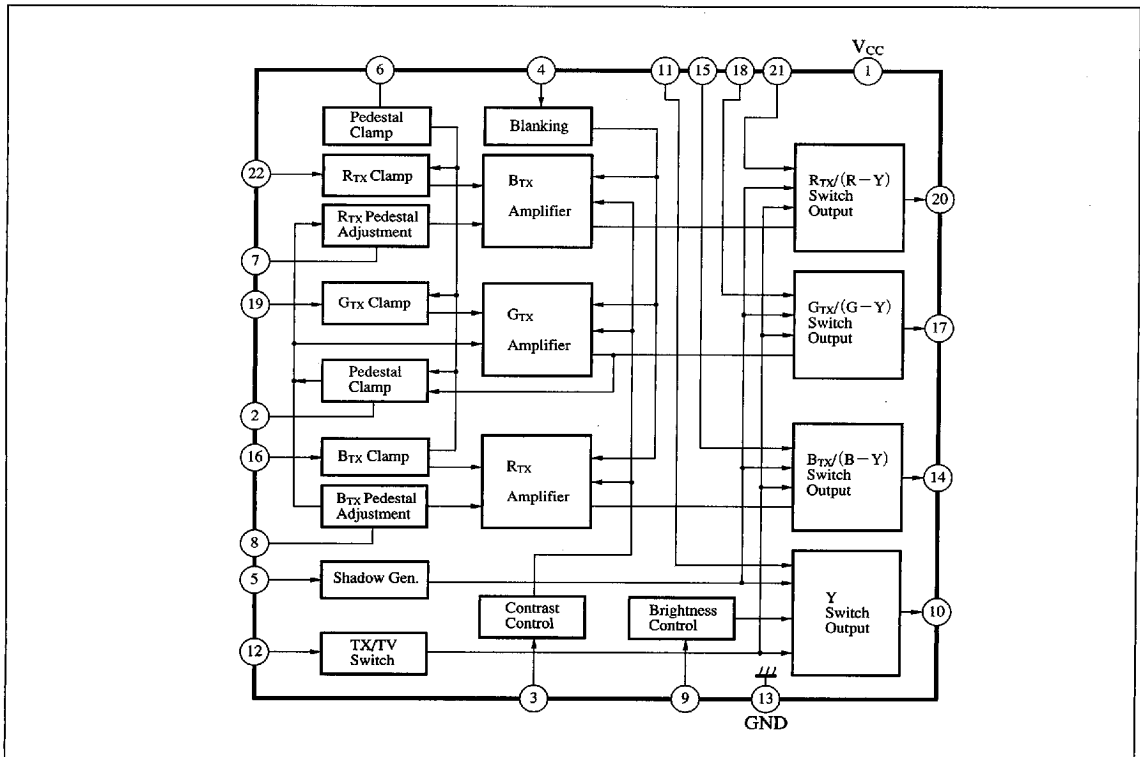
The AN5352N is an integrated circuit designed for interface between the color output stage and the teletext system decoder output, or external analog input signal.

Features

- The AN5352N provides analog signal processing for character signal input
- High speed switching
Rise and Fall time...35ns, Delay time...20ns
- Including DC controller of Brightness, Contrast, R-adjustment and B-adjustment for character signal input
- Y amplifier linear area's bottom...2.0V



Block Diagram



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■ Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Rating		Unit
Voltage	Supply voltage	V _{CC}	14.4		V
	Circuit voltage	V ₁₋₁₃	0	14.4	V
		V _{3, 6, 8, 9-13}	0	V ₁₋₁₃	V
		V ₁₁₋₁₃	2	(V ₁₋₁₃) - 1	V
		V _{15, 18, 21-13}	0	(V ₁₋₁₃) - 1	V
Current	Circuit current	I _{10, 14, 17, 20}	-30	10	mA
		I _{16, 19, 22}	-1	3	mA
Power dissipation (Ta=70°C)		P _D	1040		mW
Temperature	Ambient temperature	T _{opr}	-20 to +70		°C
	Storage temperature	T _{sig}	-55 to +150		°C

■ Electrical Characteristics (V_{CC}=12V, Ta=25°C)

Parameter	Symbol	Condition	min	typ	max	Unit
Total circuit current	I _{tot}	V _{CC} =12V	32	47	62	mA
Circuit voltage	V _{10,14,17,20-13}	V _{CC} =12V	7.7	8.0	8.3	V
	V _{16,19,22-13}		3.0	3.5	4.0	V
TV signal voltage amplification	A _{V1}	f=500kHz, Sine wave signal 1 V _{P-P}	0.95	0.98	1.00	times
AV ₁ relative voltage amplification	ΔA _{V1}	f=500kHz, Sine wave signal 1 V _{P-P}	0.95	1.00	1.05	times
TV signal frequency characteristics	f _v	Sine wave signal 1 V _{P-P} , Frequency in which A _{V1} becomes -3dB	20	—	—	MHz
Character signal voltage amplifications	A _{V2}	Character input 1 V _{P-P} , Contrast max.	3.0	3.4	3.8	times
AV ₂ relative voltage amplifications	ΔA _{V2}	Character input 1 V _{P-P} , Relative output voltage	0.85	1.00	1.15	times
Character signal contrast ratio	Δe ₀	Contrast max./min.	3.0	3.5	4.0	times
Character signal rise/fall time	t _{r(TX)} , t _{f(TX)}	V ₃ =V ₉ =6V	—	35	60	ns
Character signal rise delay time	t _{d-r(TX)}	V ₃ =V ₉ =6V	—	25	60	ns
Character signal fall delay time	t _{d-f(TX)}	V ₃ =V ₉ =6V	—	30	60	ns
Character signal t _{dr} , t _{df} 3-channel mutual difference	Δt _{d(TX)}	V ₃ =V ₉ =6V	—	—	20	ns
TX-TV changeover rise delay time	t _{d-r(TX/TV)}	V ₃ =V ₉ =6V	—	60	80	ns
TX-TV changeover fall delay time	t _{d-f(TX/TV)}	V ₃ =V ₉ =6V	—	50	70	ns
TX-TV changeover t _{dr} , t _{df} mutual difference	Δt _{d(TX/TV)}	V ₃ =V ₉ =6V	—	—	20	ns
TX-TV discrimination level	V _{i(TX/TV)}		0.50	0.65	0.70	V
Crosstalk between TV signal channels	CT _{TV}		40	45	—	dB
Crosstalk between TV signal channels	CT _{TX}		40	45	—	dB
TV-to-character changeover crosstalk	CT _{TX/TV}		40	45	—	dB
Pedestal deviation by character signal contrast change	ΔE _{TP-C}	Brightness typ., Contrast min. to max.	—	0	±150	mV
TV signal input DC level standard	TV ₁	TV input signal level [(R-Y) _{TV} , (G-Y) _{TV} , (B-Y) _{TV} , Y _{TV}]	2.0	—	10.5	V
Character signal input level standard	TX ₁	Character input signal level [R _{TX} , G _{TX} , B _{TX}]	—	1.0	1.2	V _{P-P}
TX-TV signal input level standard	TX/TV ₁		0	—	6.0	V

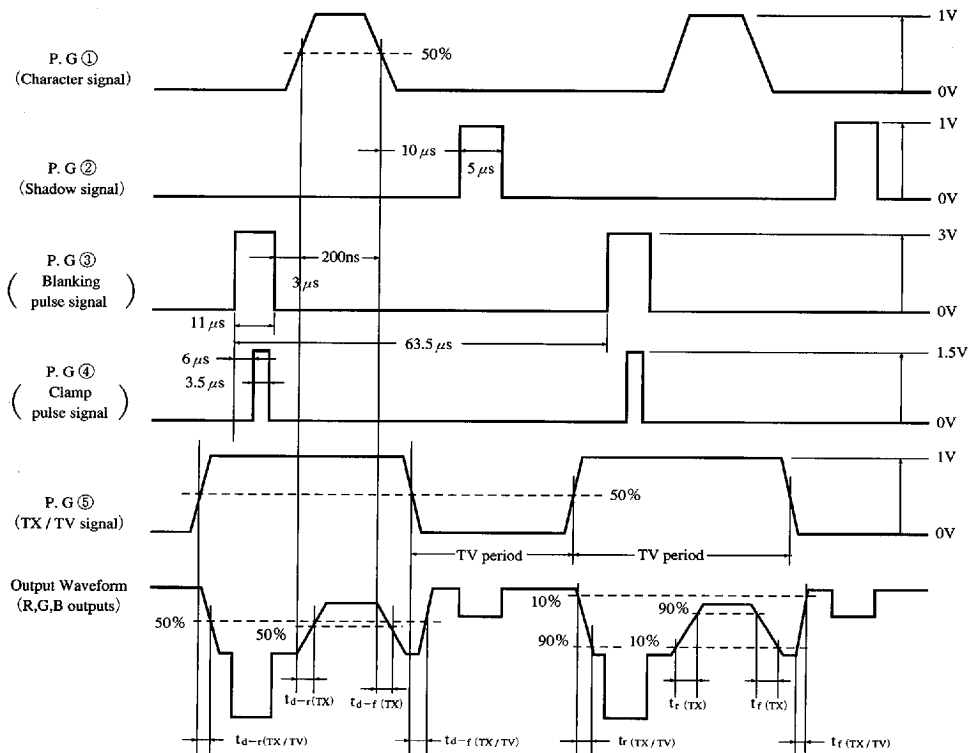


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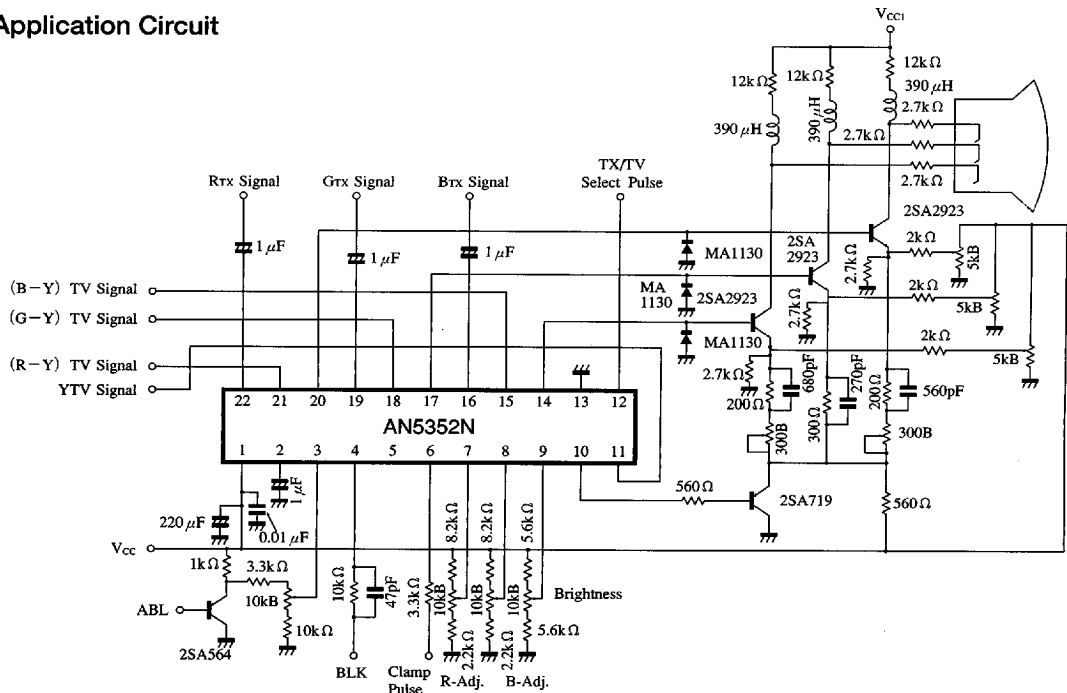
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Input/Output Pulse Waveform

- The rise/fall time of P.G ① to ⑤ should not exceed 5ns.
- Rise/fall time is enlarged in the period corresponding to P.G ① and P.G ⑤ output waveforms.



Application Circuit



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