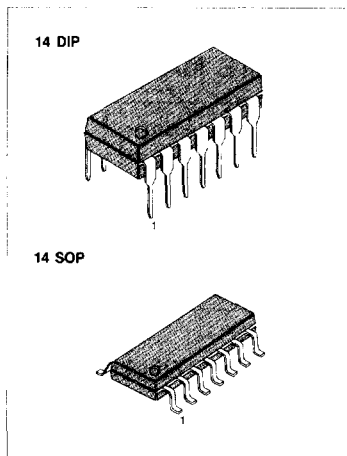


QUAD CMOS LINE RECEIVER

The KS5789A is designed to interface data terminal equipment (DTE) with data communications equipment (DCE) in conformance with the specifications of EIA RS-232-C, CCITT V.24 standards. The KS5789A is a direct replacement for the bipolar device (MC1489/A).

FEATURES

- Low power consumption & low delay slew
- Pin for pin equivalent to MC1489/A
- Inputs withstand $\pm 30V$
- Fail-safe operating mode
- Internal noise filter
- Internal input threshold with hysteresis

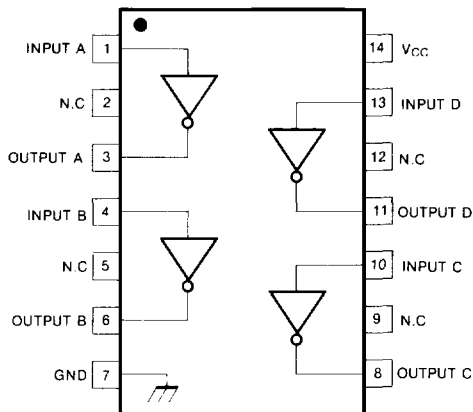


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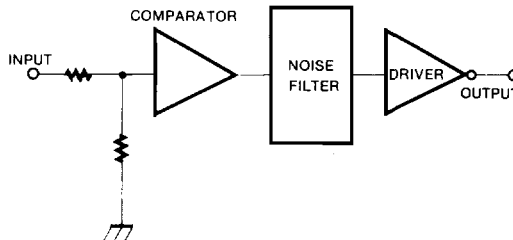
ORDERING INFORMATION

Device	Package	Operating Temperature
KS5789AN	14 DIP	-40 ~ +85°C
KS5789AD	14 SOP	

PIN CONFIGURATION



BLOCK DIAGRAM
(1/4 OF CIRCUIT SHOWN)



ABSOLUTE MAXIMUM RATINGS (Ta = 25°C, unless otherwise noted)

Characteristic	Symbol	Value	Unit
Power Supply Voltage	V _{CC}	-0.5 ~ 7.0	V _{dc}
Input Voltage	V _{IN}	-30 ~ 30	V _{dc}
Output Voltage	V _{OUT}	-0.3 ~ V _{CC} + 0.3	V _{dc}
Power Dissipation (85°C)	P _D	500	mW
Operating Temperature	T _a	-40 ~ 85	°C
Storage Temperature	T _{stg}	-65 ~ 150	°C

ELECTRICAL CHARACTERISTICS

(V_{CC} = 5V ± 0.5V, Ta = -40° to 85°C, unless otherwise noted)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
DC ELECTRICAL CHARACTERISTICS						
Input Voltage High	V _{IH}		1.3		2.5	V _{dc}
Input Voltage Low	V _{IL}		0.5		1.7	V _{dc}
Input Hysteresis Voltage	V _H	V _{IH} - V _{IL}		1.0		V _{dc}
Input Current	I _{IN}	V _{IN} = 3V V _{IN} = -3V V _{IN} = 25V V _{IN} = -25V	0.43 -0.43 3.6 -3.6		1.0 -1.0 8.3 -8.3	mA
Output Voltage High	V _{OH}	V _{IN} = V _{IL(min)} , I _{OUT} = -3.2mA	2.8			V _{dc}
Output Voltage Low	V _{OL}	V _{IN} = V _{IH(max)} , I _{OUT} = 3.2mA			0.4	V _{dc}
Supply Current	I _{CC}	R _L = ∞, V _{IN} = V _{IL(min)} to V _{IH(max)}			600	μA
SWITCHING CHARACTERISTICS (V_{CC} = 4.5V to 5.5V, Ta = -40° ~ 85°C, C_L = 50pF, Note 1)						
Propagation Delay	t _p	Input pulse width ≥ 10μS			6.5	μS
Output Rise Time	t _r				300	nS
Output Fall Time	t _f				300	nS
Pulse Width Assumed to be Noise	t _{nw}				1.0	μS
Propagation Delay Skew	t _{sk}			400		nS

Note 1: Test waveform t_r = t_f = 200ns, V_{IH} = +3V, V_{IL} = -3V, f = 20KHz

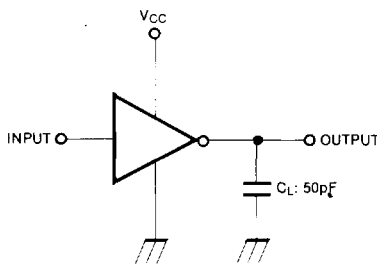


Fig. 1 AC Test Circuit

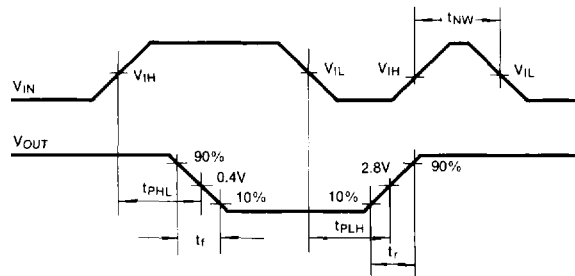


Fig. 2 Switching Waveforms