μCOM-44 SINGLE CHIP MICROCOMPUTER

DESCRIPTION

The μPD552 is a high negative output version of the μCOM-44. This PMOS, -10 volt part is designed with outputs capable of being pulled to -35 volts. This allows direct interfacing with Fluorescent Indicator Panels (FIPs). As a μCOM-44, it includes 1000 x 8 ROM, 64 x 4 RAM and 35 I/O lines in a 42 pin plastic dual-in-line package.

ABSOLUTE MAXIMUM RATINGS*

Operating Temperature	-10°C to +70°C
Storage Temperature	-40°C to +125°C
Supply Voltage	-15 to +0.3 Volts
Input Voltages (Port A, $\overline{INT}$, RES, TEST)	-15 to +0.3 Volts
(All Other Inputs)	-40 to +0.3 Volts
Output Voltages	-40 to +0.3 Volts
Output Current (Each Output Bit)	-12 mA
(Total Current)	-60 mA

COMMENT: Stress above those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

*T_a = 25°C

DC/AC CHARACTERISTICS

T_a = -10°C to +70°C, V_{GG} = -10V ± 10%

PARAMETER	SYMBOL	LIMITS MIN	LIMITS TYP	LIMITS MAX	UNIT	TEST CONDITIONS
Input High Voltage	V_{IH}	0		-3.5	V	Ports A to D, $\overline{INT}$, RES
Input Low Voltage	V_{IL1}	-7.5		V_{GG}	V	Ports A and B, $\overline{INT}$, RES
	V_{IL2}	-7.5		-35	V	Ports C and D
Input Leakage Current High	I_{LIH}			+10	μA	Ports A and B, $\overline{INT}$, RES, TEST V_I = -1V
Input Leakage Current Low	I_{LIL1}			-10	μA	Ports A and B, $\overline{INT}$, RES, TEST V_I = -11V
	I_{LIL2}			-30	μA	Ports A and B V_I = -35V
I/O Leakage Current High	I_{IOH}			+10	μA	Ports C and D V_I = -1V
I/O Leakage Current Low	I_{IOL1}			-10	μA	Ports C and D V_I = -11V
	I_{IOL2}			-30	μA	Ports C and D V_I = -35V
Output Voltage	V_{OH}			-2.0	V	Ports C to I I_O = -8 mA
Output Leakage Current	I_{OL1}			-10	μA	Ports C to I V_O = -11V
	I_{OL2}			-30	μA	Ports C to I V_O = -35V
Supply Current	I_{GG}		-30	-50	mA	
Oscillator Frequency	F	150		440	KHz	

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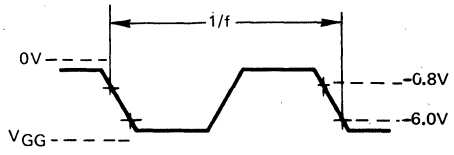
μPD552

CAPACITANCE

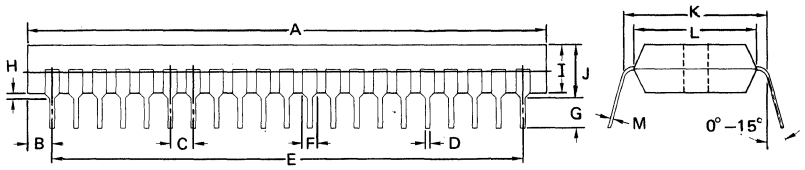
T_a = 25°C, f = 1 MHz

PARAMETER	SYMBOL	LIMITS MIN	LIMITS TYP	LIMITS MAX	UNIT	TEST CONDITIONS
Input Capacitance	C_I			15	pf	f = 1 MHz
Output Capacitance	C_O			15	pf	
Input/Output Capacitance	C_{IO}			15	pf	

CLOCK WAVEFORM



PACKAGE OUTLINE μPD552C



ITEM	MILLIMETERS	INCHES
A	56.0 MAX	2.2 MAX
B	2.6 MAX	0.1 MAX
C	2.54	0.1
D	0.5 ± 0.1	0.02 ± 0.004
E	50.8	2.0
F	1.5	0.059
G	3.2 MIN	0.126 MIN
H	0.5 MIN	0.02 MIN
I	5.22 MAX	0.20 MAX
J	5.72 MAX	0.22 MAX
K	15.24	0.6
L	13.2	0.52
M	0.3 ± 0.1	0.01 ± 0.004