

μCOM-43 SINGLE CHIP MICROCOMPUTER

DESCRIPTION The μPD553 is a high negative output version of the μCOM-43. 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-43, it includes 2000 x 8 ROM, 96 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, 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			UNIT	TEST CONDITIONS
		MIN	TYP	MAX		
Input High Voltage	V _{IH}	0		-3.5	V	Ports A to D, INT, RES
Input Low Voltage	V _{IL1}	-7.5		V _{GG}	V	Ports A and B, INT, RES
	V _{IL2}	-7.5		-35	V	Ports C and D
Input Leakage Current High	I _{LIH}			+10	μA	Ports A and B, INT, RES, TEST V _I = -1V
Input Leakage Current Low	I _{LIL1}			-10	μA	Ports A and B, INT, RES, TEST V _I = -11V
	I _{LIL2}			-30	μA	Ports A and B V _I = -35V
I/O Leakage Current High	I _{I0H}			+10	μA	Ports C and D V _I = -1V
I/O Leakage Current Low	I _{I0L1}			-10	μA	Ports C and D V _I = -11V
	I _{I0L2}			-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	



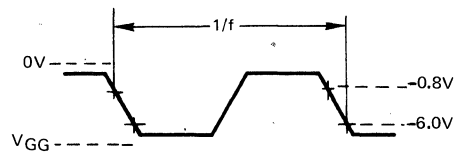
μ PD553

T_a = 25°C, f = 1 MHz

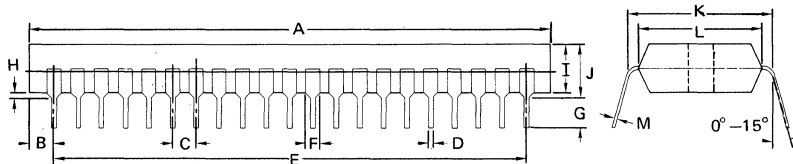
CAPACITANCE

PARAMETER	SYMBOL	LIMITS			UNIT	TEST CONDITIONS
		MIN	TYP	MAX		
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 μPD553C



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