

查询TC40H139供应商

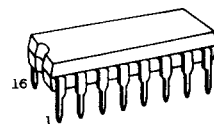
TC40H139P/F

C²MOS DIGITAL INTEGRATED CIRCUIT
SILICON MONOLITHIC

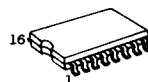
TC40H139 DUAL 2-TO-4-LINE DECODER/DEMULPLEXER

The TC40H139 is a dual decoder/demulti-plexer, which can select one of four output lines through two input lines A and B according to the following truth table. The selected output at this time is at "L" level.

Further, when ENABLE input $\bar{G}$ is set to "H" level, the selection is inhibited regardless of SELECT signal and all the outputs go to "H" level.



DIP16(3D16A-P)

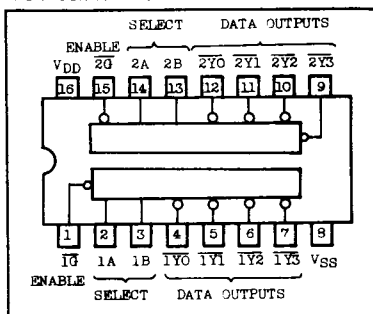


MFP16(P16QC-P)

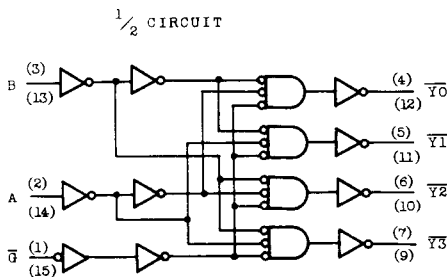
MUMM RATING S

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{DD}	V _{SS} -0.5 ~ V _{SS} +10	V
Input Voltage	V _{IN}	V _{SS} -0.5 ~ V _{DD} +0.5	V
Output Voltage	V _{OUT}	V _{SS} -0.5 ~ V _{DD} +0.5	V
Input Current	I _{IN}	±10	mA
Power Dissipation	P _D	300(DIP)/180(MFP)	mW
Storage Temperature	T _{stg}	-65 ~ 150	°C
Lead Temp./Time	T _{sol}	260°C • 10 sec	

PIN CONNECTION



LOGIC DIAGRAM



TRUTH TABLE

INPUTS			OUTPUTS			
ENABLE	SELECT		Y ₀	Y ₁	Y ₂	Y ₃
$\bar{G}$	A	B	Y ₀	Y ₁	Y ₂	Y ₃
H	*	*	H	H	H	H
L	L	L	L	H	H	H
L	H	L	L	L	H	H
L	L	H	H	H	L	H
L	H	H	H	H	H	L

* don't care

* ALL INPUTS ARE EQUIPPED WITH PROTECTION CIRCUIT.

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RECOMMENDED OPERATING CONDITIONS ($V_{SS}=0.0V$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V_{DD}	-	2.0	-	8.0	V
Input Voltage	V_{IN}	-	0.0	-	V_{DD}	V
Operating Temperature	T_{OP}	-	-40	-	85	°C

ELECTRICAL CHARACTERISTICS ($V_{SS}=0.0V$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	V_{DD} (V)	-40°C		25°C			85°C		UNIT
				MIN.	MAX.	MIN.	TYP.	MAX.	MIN.	MAX.	
High Level Output Voltage	V_{OH}	$I_{OUT} < 1\mu A$ $V_{IN}=V_{SS}, V_{DD}$	5	4.95	-	4.95	5.0	-	4.95	-	V
Low Level Output Voltage	V_{OL}	$I_{OUT} < 1\mu A$ $V_{IN}=V_{SS}, V_{DD}$	5	-	0.05	-	0.0	0.05	-	0.05	
High Level Output Current	I_{OH}	$V_{OH}=4.6V$ $V_{IN}=V_{SS}, V_{DD}$	5	-0.52	-	-0.44	-	-	-0.36	-	mA
Low Level Output Current	I_{OL}	$V_{OL}=0.4V$ $V_{IN}=V_{SS}, V_{DD}$	5	1.4	-	1.1	-	-	0.8	-	
Input Voltage	"H" Level V_{IH}	$I_{OUT} < 1\mu A$ $V_{OH}=4.5V$ $V_{OL}=0.5V$	5	4.0	-	4.0	-	-	4.0	-	V
	"L" Level V_{IL}		5	-	1.0	-	-	1.0	-	1.0	
Input Current	"H" Level I_{IH}	$V_{IH}=8.0V$	8	-	0.3	-	10^{-5}	0.3	-	1.0	μA
	"L" Level I_{IL}	$V_{IL}=0.0V$	8	-	-0.3	-	-10^{-5}	-0.3	-	-1.0	
Quiescent Supply Current	I_{DD}	$*V_{IN}=V_{SS}, V_{DD}$	5	-	12.5	-	10^{-3}	12.5	-	75	μA

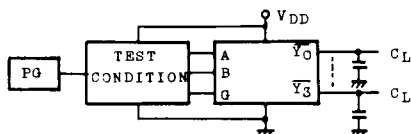
* All valid input combinations.

SWITCHING CHARACTERISTICS ($T_a=25^\circ C$, $V_{SS}=0.0V$, $C_L=15pF$)

CHARACTERISTIC		SYMBOL	TEST CONDITION	V_{DD} (V)	MIN.	TYP.	MAX.	UNIT
Output Rise Time		t_{OR}		5	-	17	35	ns
Output Fall Time		t_{OF}		5	-	13	30	
Propagation Delay Time	(Low-High)	t_{PLH}	SELECT - Y	5	-	32	48	ns
	(High-Low)	t_{PHL}		5	-	30	45	
Propagation Delay Time	(Low-High)	t_{PLH}	ENABLE - Y	5	-	32	48	ns
	(High-Low)	t_{PHL}		5	-	30	45	
Input Capacitance		C_{IN}			-	5	-	pF

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SWITCHING TIME TEST CIRCUIT AND WAVEFORM



TEST NO.	INPUTS			OUTPUTS	
	ENABLE	SELECT			
	$\overline{Y_0}$	A	B	$\overline{Y_0}$	$\overline{Y_1}$
1	L	$\overline{H}$	L	$\overline{Y_0}$	$\overline{Y_1}$
2	L	L	$\overline{H}$	$\overline{Y_0}$	$\overline{Y_2}$
3	L	$\overline{H}$	$\overline{H}$	$\overline{Y_0}$	$\overline{Y_3}$
4	$\overline{H}$	H	H	$\overline{Y_0}$	-

* ALL OUTPUTS ARE MEASURED ACCORDING TO THE LEFT TABLE.

