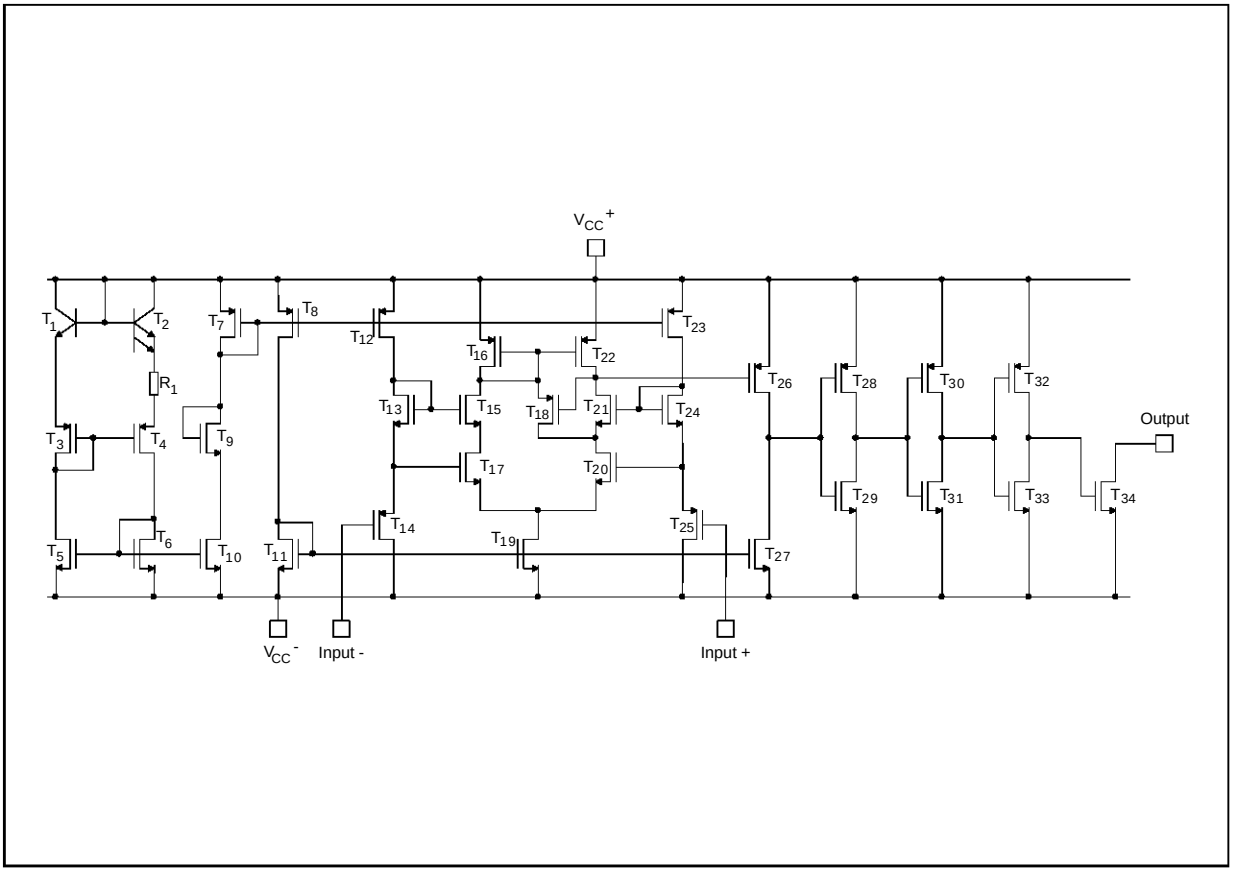
SCHEMATIC DIAGRAM (for 1/4 TS374)



MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CC}^+	Supply Voltage - (note 1)	18	V
V_{id}	Differential Input Voltage - (note 2)	±18	V
V_i	Input Voltage - (note 3)	18	V
V_O	Output Voltage	18	V
I_O	Output Current	20	mA
	Duration of Output Short-Circuit to GND - (note 4)	Infinite	
T_{oper}	Operating Free-Air Temperature Range TS374C TS374I TS374M	 0 to +70 -40 to +125 -55 to +125	°C
T_{stg}	Storage Temperature Range	-65 to +150	°C

Notes : 1. All voltage values, except differential voltage, are with respect to network ground terminal.
2. Differential voltages are the non-inverting input terminal with respect to the inverting input terminal.
3. The magnitude of the input and the output voltages must never exceed the magnitude of the positive supply voltage.
4. Short circuit from outputs to V_{CC}^+ can cause excessive heating and eventual destruction.

OPERATING CONDITIONS

Symbol	Parameter	Value	Unit
V_{CC}^+	Supply Voltage	3 to 16	V
V_{icm}	Common Mode Input Voltage Range	0 to V_{CC}^+ -1.5	V

ELECTRICAL CHARACTERISTICSED

$V_{CC}^+ = 5V$, $V_{CC}^- = 0V$, $T_{amb} = 25^oC$ (unless otherwise specified)

Symbol	Parameter		Min.	Typ.	Max.	Unit
V_{io}	Input Offset Voltage ($V_{ic} = V_{icm\ min.}$) - (note 1) $T_{amb} = 25^oC$ $T_{min.} \leq T_{amb} \leq T_{max.}$			2	10 12	mV
I_{io}	Input Offset Current - (note 2) $T_{amb} = 25^oC$ $T_{min.} \leq T_{amb} \leq T_{max.}$	TS374C TS374I/TS374M		1	100 200	pA
I_{ib}	Input Bias Current - (note 2) $T_{amb} = 25^oC$ $T_{min.} \leq T_{amb} \leq T_{max.}$	TS374C TS374I/TS374M		1	150 300	pA
V_{icm}	Input Common Mode Voltage Range $T_{amb} = 25^oC$ $T_{min.} \leq T_{amb} \leq T_{max.}$	TS374C TS374I/TS374M	0 to V_{CC}^+ -2 0 to V_{CC}^+ -2.25 0 to V_{CC}^+ -2.5			V
I_{OH}	High Level Output Current (V_{id} = 1V) $T_{amb} = 25^oC$ $T_{min.} \leq T_{amb} \leq T_{max.}$	V_{OH} = 5V V_{OH} = 15V		0.1	 1	nA µA
V_{OL}	Low Level Output Voltage (V_{id} = -1V, I_{OL} = 4mA) $T_{amb} = 25^oC$ $T_{min.} \leq T_{amb} \leq T_{max.}$			100	400 700	mV
I_{OL}	Low Level Output Current (V_{id} = -1V, V_{OL} = 1.5V)		6	45		mA
I_{CC}	Supply Current (4 comparators) (V_{id} = +1V, no load)			0.6	1	mA

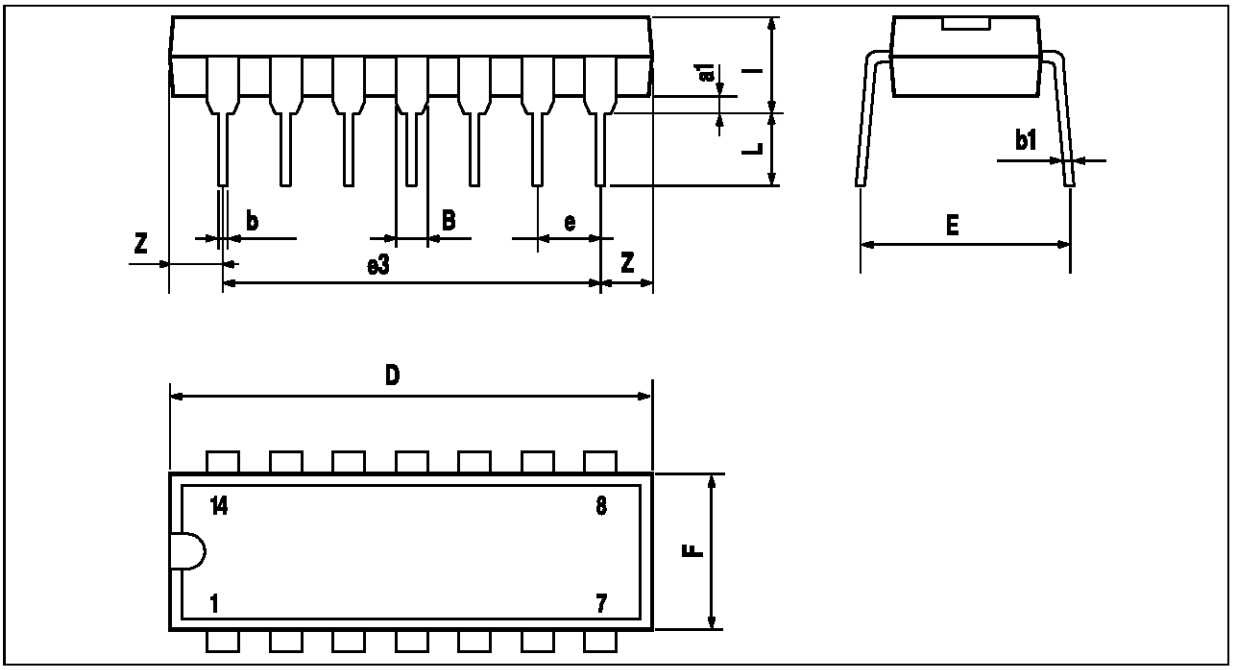
SWITCHING CHARACTERISTICS ($V_{CC}^+ = 5V$, $T_{amb} = 25^oC$)

Symbol	Parameter	Min.	Typ.	Max.	Unit
t_{re}	Response Time (R_L = 5.1kΩ connected to 5V, C_L = 15pF - (note 3) • 100mV input step with 5mV overdrive • TTL level input step		 600 200		ns

Notes : 1. The specified offset voltage is the maximum value required to drive the output down to 400mV or up to 4V with R_L = 100kΩ to V_{CC}^+.
2. Maximum values including unavoidable inaccuracies of the industrial test.
3. The response time which is specified is the internal between the input signal and the instant when the output signal crosses 1.4V.

PACKAGE MECHANICAL DATA

14 PINS - PLASTIC DIP

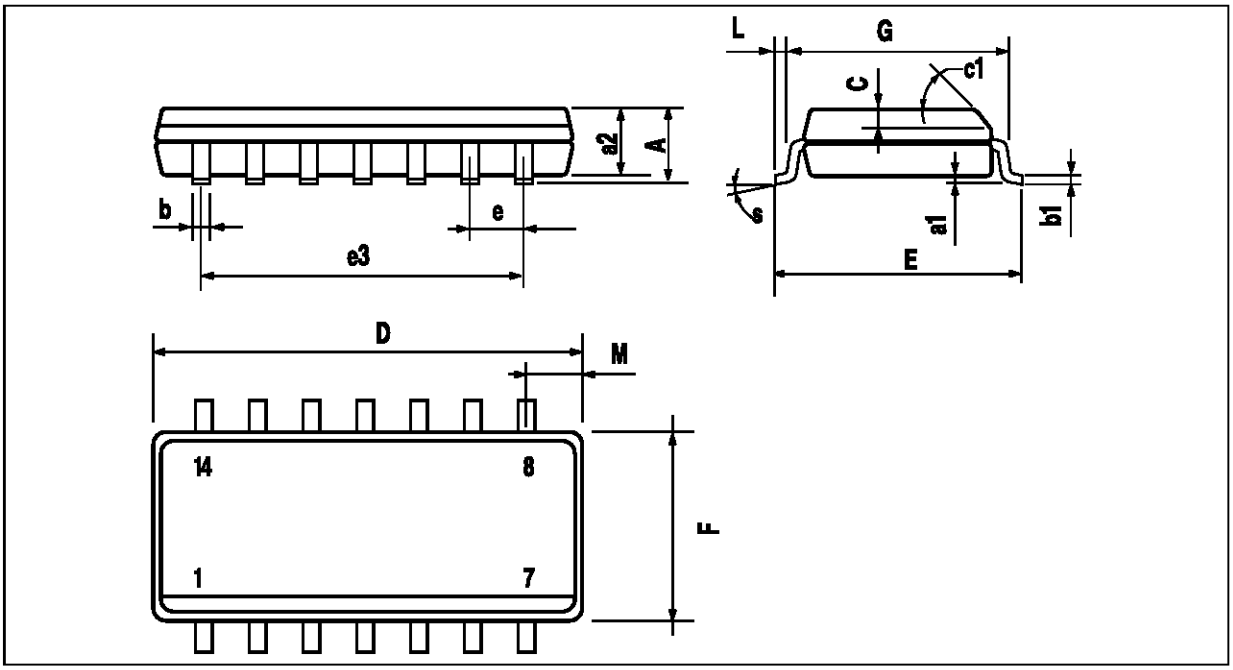


Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
a1	0.51			0.020		
B	1.39		1.65	0.055		0.065
b		0.5			0.020	
b1		0.25			0.010	
D			20			0.787
E		8.5			0.335	
e		2.54			0.100	
e3		15.24			0.600	
F			7.1			0.280
i			5.1			0.201
L		3.3			0.130	
Z	1.27		2.54	0.050		0.100

SO14.TBL

PACKAGE MECHANICAL DATA

14 PINS - PLASTIC MICROPACKAGE (SO)



PM-SO14.EPS

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			1.75			0.069
a1	0.1		0.2	0.004		0.008
a2			1.6			0.063
b	0.35		0.46	0.014		0.018
b1	0.19		0.25	0.007		0.010
C		0.5			0.020	
c1	45° (typ.)					
D	8.55		8.75	0.336		0.334
E	5.8		6.2	0.228		0.244
e		1.27			0.050	
e3		7.62			0.300	
F	3.8		4.0	0.150		0.157
G	4.6		5.3	0.181		0.208
L	0.5		1.27	0.020		0.050
M			0.68			0.027
S	8° (max.)					

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ORDER CODE :