

T-52-07.

IR2C34 4-Unit 320mA Transistor Array

■ Description

The IR2C34 is a 4-circuit driver IC, which is able to directly drive a load of 320mA with minute input current.

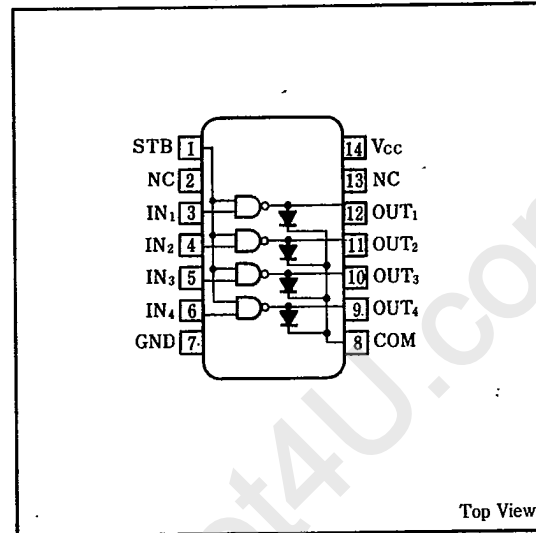
It is suited for driving printers, relays, LEDs and lamps. With a strobe input terminal provided, this transistor array allows all the circuits to stop interrupts without adding any external transistor.

The clamp diode for spike killer, being provided for each output, prevents the output transistor from being destroyed by reverse electromotive force.

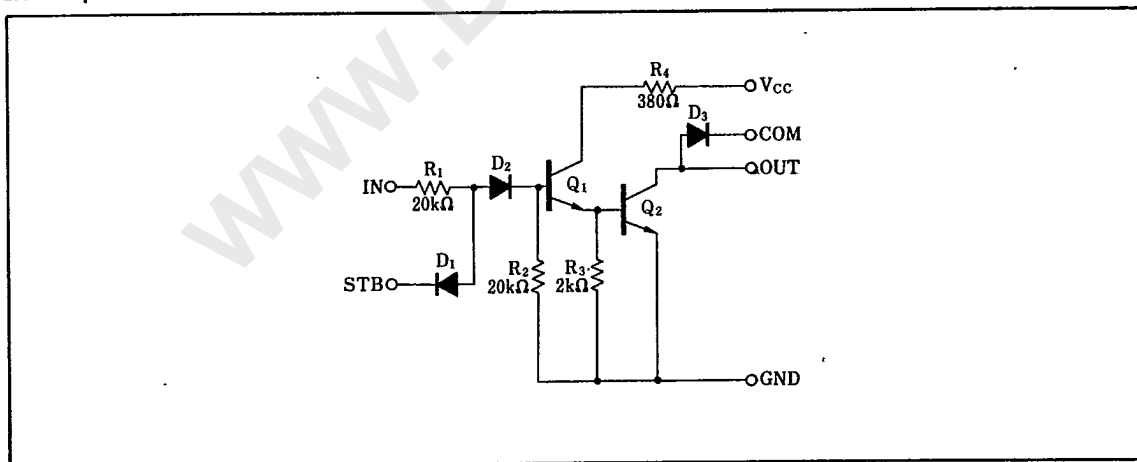
■ Features

1. Strobe terminal
2. Clamp diode
3. Output breakdown voltage $BV_{CEO} = 20V$ (MAX.)
4. Output current $I_{OUT} = 320mA$ (MAX.)
5. 14-pin dual-in-line package

■ Pin Connections



■ Equivalent Circuit



SHARP

■ Absolute Maximum Ratings

(Ta = -20°C ~ +75°C)

Parameter	Symbol	Condition	Rating	Unit
Supply voltage	V _{CC}		10	V
Output breakdown voltage	BV _{CRO}		20	V
Output current	I _{OUT}		320	mA
Input voltage	V _{IN}		-25 ~ +20	V
Strobe input voltage	V _{IN} STB		20	V
Clamp diode reverse voltage	V _R		20	V
Clamp diode forward current	I _F		320	mA
Power dissipation	P _D	Ta ≤ 25°C	1.14	W
P _D derating ratio	ΔP _D /°C	Ta > 25°C	11.4	mW/°C
Operating temperature	T _{opr}		-20 ~ +75	°C
Storage temperature	T _{str}		-55 ~ +150	°C

■ Recommended Operating Conditions

(Ta = -20°C ~ +75°C)

Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Supply voltage	V _{CC}		3		8	V
Maximum output voltage	V _{CRO}				20	V
Output current	I _{OUT}	V _{CC} = 6.5V at 25% duty or less			300	mA
		V _{CC} = 6.5V at 65% duty or less			150	
Input "High" voltage	V _{HI}	I _{OUT} = 150mA	5			V
		I _{OUT} = 300mA	7			
Input "Low" voltage	V _{IL}	I _{OUT} (Leak) = 50 μA			1	V
Input "High" voltage (strobe)	V _{HI} STB		2.4			V
Input "Low" voltage (strobe)	V _{IL} STB				0.2	V

■ Input/Output Logic

IN	STB	OUT
L	L	H
H	L	H
L	H	H
H	H	L

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(Ta = -20°C ~ +75°C)

Electrical Characteristics

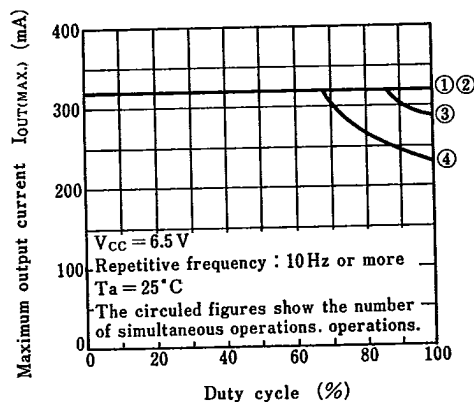
Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Output breakdown voltage	BV_{CEO}	$V_{CC}=8V, V_{IN}=18V,$ $V_{IN\ STB}=0.2V, I_{OUT}=100\ \mu A$	20			V
Output voltage at ON	$V_{OUT\ ON1}$	$V_{IN}=7V$ $V_{CC}=6.5V,$ $I_{OUT}=300mA$		0.6	1.0	V
	$V_{OUT\ ON2}$	$V_{IN\ STB}$ $I_{OUT}=250mA$ $V_{CC}=6.5V,$		0.5	0.85	V
	$V_{OUT\ ON3}$	$=2.4V$ $V_{CC}=3V,$ $I_{OUT}=120mA$		0.3	0.5	V
Input current	I_{IN}	$V_{CC}=8V, V_{IN}=18V,$ $V_{IN\ STB}=2.4V$		0.8	1.8	mA
Input reverse leakage current	I_{IR}	$V_{CC}=8V, V_{IN}=-25V$			-20	μA
Strobe input current	I_{IS}	$V_{CC}=8V, V_{IN}=18V$ (All inputs), $V_{IN\ STB}=0.2V$		-4		mA
Strobe reverse leakage current	$I_{I\ STB}$	$V_{CC}=8V, V_{IN}=0V,$ $V_{IN\ STB}=20V$			20	μA
Clamp diode forward voltage	V_F	$I_F=320mA$		1.4	2.4	V
Clamp diode reverse voltage	V_R	$I_R=100\ \mu A$	20			V
Supply current	I_{CC}	$V_{CC}=8V, V_{IN}=7V$ (All input), $V_{IN\ STB}=2.4V$			130	mA
DC current amplification	h_{FE}	$V_{OUT}=4V, V_{CC}=6.5V,$ $I_{OUT}=300mA, T_a=25^\circ C$	1000			



Electrical Characteristic Curves

Maximum output current

- Duty cycle Characteristics (1)



Maximum output current

- Duty cycle Characteristics (2)

