

T-52-13-07

# IR3403

## 5-Unit 400mA Darlington Transistor Array

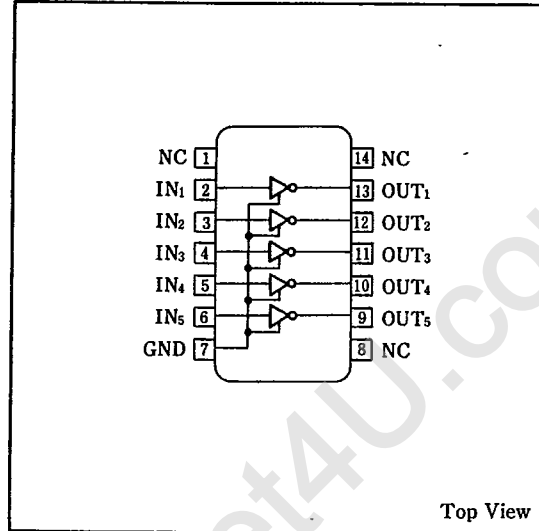
### Description

The IR3403 is a 5-circuit driver. This IC can be used to drive high output current relays and LED digital display devices directly.

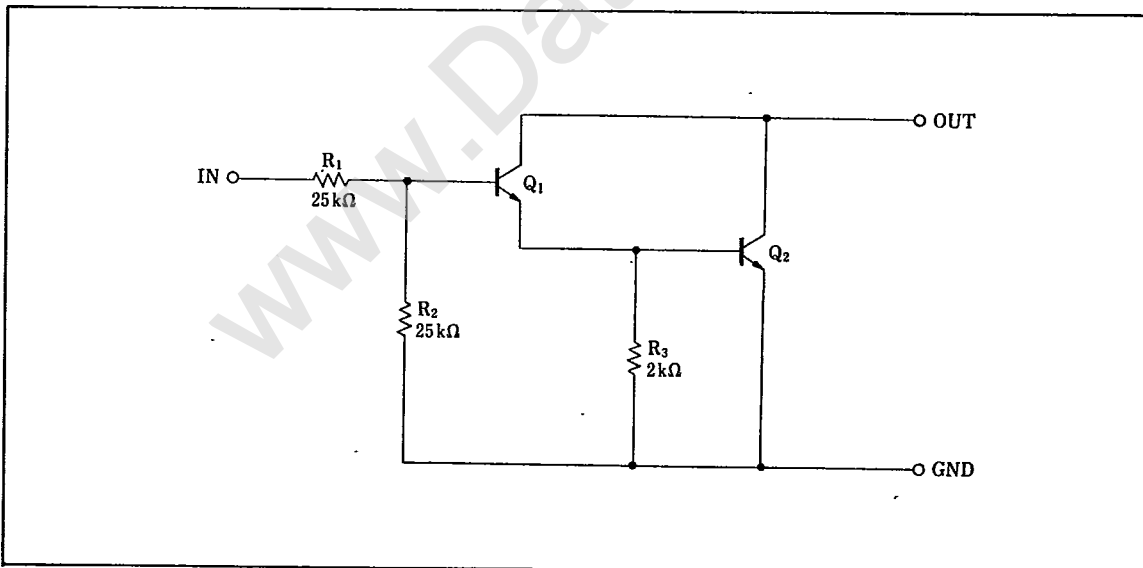
### Features

1. High output current  $I_{OUT}=400\text{mA}$  (MAX.)
2. High output breakdown voltage  
 $BV_{CEO}=30\text{V}$  (MAX.)
3. Directly driven by MOS output
4. Darlington construction
5. 14-pin dual-in-line package

### Pin Connections



### Equivalent Circuit



SHARP

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### Absolute Maximum Ratings

Parameter	Symbol	Condition	Rating	Unit
Supply voltage	$V_{CC}$		30	V
Output current *1	$I_{OUT}$	Each circuit	400	mA
Input voltage (positive)	$V_{IN(+)}$		30	V
Input voltage (negative)	$V_{IN(-)}$		-0.5	V
Breakdown voltage between collector-base	$BV_{CBO}$		30	V
Breakdown voltage between collector-emitter	$BV_{CEO}$		30	V
Power dissipation	$P_D$	$T_a \leq 25^\circ\text{C}$	550	mW
$P_D$ derating ratio	$\Delta P_D / ^\circ\text{C}$	$T_a > 25^\circ\text{C}$	5.5	mW/ $^\circ\text{C}$
Operating temperature	$T_{OPF}$	*2	-25 ~ +85	$^\circ\text{C}$
Storage temperature	$T_{STG}$		-55 ~ +125	$^\circ\text{C}$



\*1 Duty cycle 16% or less, repetitive frequency 10Hz or more.

\*2 With  $T_a = 75^\circ\text{C} \sim 85^\circ\text{C}$ , repetitive frequency 3kHz or more, duty cycle 19% or less output current in each circuit 90mA or less.

### Electrical Characteristics

(Ta=25°C)

Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Supply voltage	$V_{CC}$				26	V
ON-state input current	$I_{I\ ON}$	$V_{IN} = 26\text{V}, I_{OUT} = 0\text{mA}$		0.8	1.5	mA
ON-state output voltage	$V_{O\ ON1}$	$V_{IN} = 14\text{V}, I_{OUT} = 350\text{mA}$		1.5	2.2	V
	$V_{O\ ON2}$	$V_{IN} = 14\text{V}, I_{OUT} = 200\text{mA}$		1.2	1.5	V
OFF-state output current	$I_{O\ OFF}$	$V_{IN} = 0\text{V}, V_{OUT} = 20\text{V}$			10	$\mu\text{A}$
DC current amplitude	$h_{FE}$	$V_{CE} = 5\text{V}, I_{OUT} = 200\text{mA}$	2,000			

### Electrical Characteristic Curve

#### Output current—Duty cycle Characteristics

