

# 7-channel Darlington transistor array

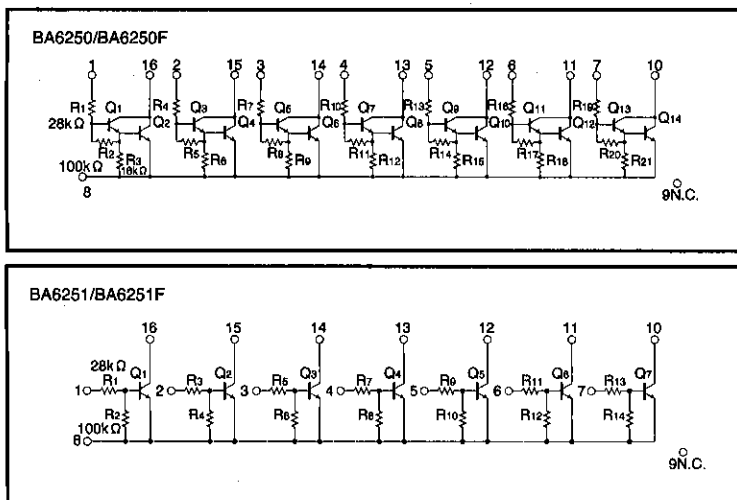
## BA6250/BA6250F/BA6251/BA6251F

The BA6250, BA6250F, BA6251, and BA6251F are 7-channel transistor arrays particularly suitable for interfaces between a microcomputer in a VTR and the various ICs, or between one IC and another, and for low current drives such as LEDs.

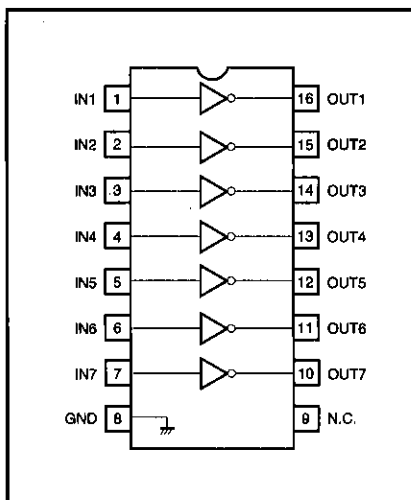
### ●Features

- 1) High withstanding output voltage of 30V (max.).
- 2) Output current of 20mA max. ( $V_{IN} \geq 3V$ ).

### ●Internal circuit configuration diagram



### ●Block diagram



### ●Absolute maximum ratings ( $T_a=25^\circ\text{C}$ )

Parameter	Symbol	Limits	Unit
Power supply voltage	$V_{CE0}$	30	V
Power dissipation	$P_d$	500 *	mW
Operating temperature	$T_{opr}$	$-25 \sim 75$	$^\circ\text{C}$
Storage temperature	$T_{stg}$	$-55 \sim 125$	$^\circ\text{C}$
Input voltage	$V_{IN}$	30	V
Output current	$I_O \text{ Max.}$	30	mA

\* Reduced by 5mW for each increase in  $T_a$  of  $1^\circ\text{C}$  over  $25^\circ\text{C}$ .

Transistor arrays

●Electrical characteristics (unless otherwise noted,  $T_a=25^\circ\text{C}$ ,  $V_{CC}=12\text{V}$ )

Parameter	Symbol	Type	Min.	Typ.	Max.	Unit	Conditions	Measurement Circuit
Output power supply voltage range	$V_O$	BA6250 / BA6250F	—	12	28	V	—	Fig. 1
		BA6251 / BA6251F	—	12	28		—	
"H" input voltage	$V_{IH}$	BA6250 / BA6250F	3	—	—	V	$I_{OUT}=20\text{mA}$	Fig. 1
		BA6251 / BA6251F	2	—	—		$I_{OUT}\geq 1\text{mA}$	
"L" input voltage	$V_{IL}$	BA6250 / BA6250F	—	—	0.6	V	$I_{OUT}\leq 10\mu\text{A}$	Fig. 2
		BA6251 / BA6251F	—	—	0.3		$I_{OUT}\leq 10\mu\text{A}$	
Output voltage	$V_{OUT}$	BA6250 / BA6250F	—	—	1.4	V	$I_{OUT}=20\text{mA}$ , $V_{IN}=12\text{V}$	Fig. 1
Output saturation voltage	$V_{CE(sat)}$	BA6251 / BA6251F	—	0.3	—		$I_{OUT}=10\text{mA}$ , $V_{IN}=12\text{V}$	
Output current	$I_{OUT}$	BA6250 / BA6250F	—	—	20	mA	$V_{IN}\geq 3\text{V}$	Fig. 1
		BA6251 / BA6251F	—	—	20		$V_{IN}\geq 12\text{V}$	
Input current	$I_{IN}$	BA6250 / BA6250F	—	—	0.6	mA	$I_{OUT}=10\text{mA}$ , $V_{IN}=12\text{V}$	Fig. 1
		BA6251 / BA6251F	—	—	0.6		$I_{OUT}=10\text{mA}$ , $V_{IN}=12\text{V}$	
Output leakage current	$I_L$	BA6250 / BA6250F	—	—	1	$\mu\text{A}$	$V_{CC}=28\text{V}$ , $V_{IN}=0\text{V}$	—

## ●Measurement circuits

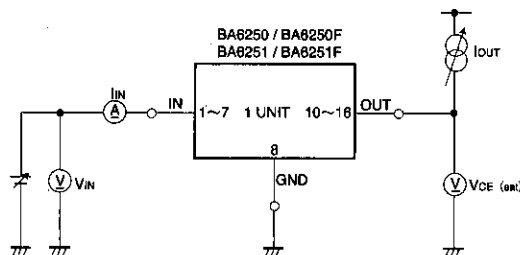


Fig.1

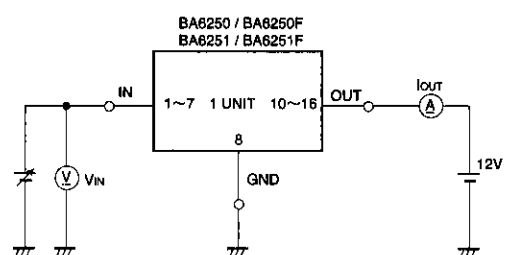


Fig.2

## ●External dimensions (Units: mm)

