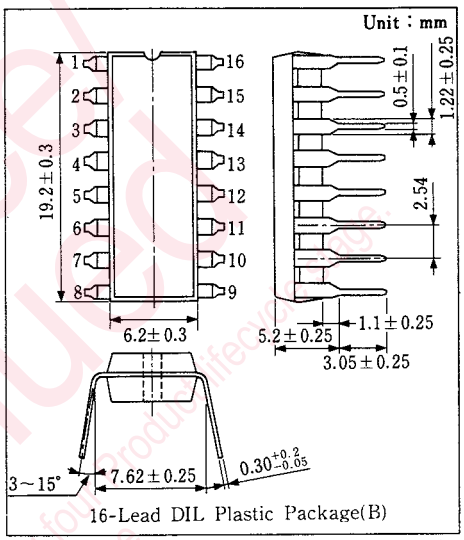
AN90D21

Transistor Array

■ Outline

The transistor array, the AN90D21 is an integrated circuit in which 7 darlington transistor circuits are incorporated.

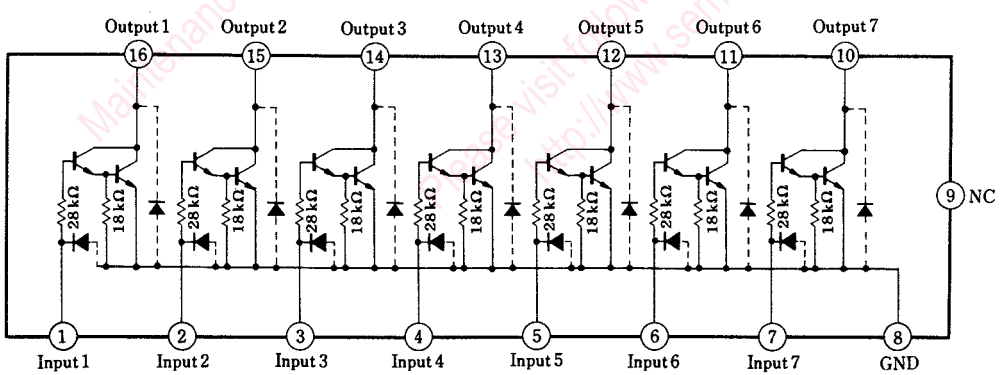


16-Lead DIL Plastic Package(B)

■ Features

- High h_{FE}
- 7 darlington transistors
- Output current : I_O=30mA
- Breakdown voltage : V_{CEO}=30V
- Base current limiting resistor built-in

■ Schematic Diagram



■ Absolute Maximum Ratings (Ta=25°C)

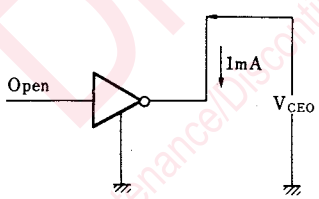
Item	Symbol	Rating	Unit
Collector Base Voltage	V_{CBO}	50	V
Collector Substrate Voltage	V_{CIO}	50	V
Collector/Emitter Voltage	V_{CEO}	30	V
Collector Current	I_C	30	mA
Collector Power dissipation	P_C *1	200	mW
Power Dissipation	P_D *2	1000	mW
Operating Ambient Temperature	T_{opr}	−30～+75	°C
Storage Temperature	T_{stg}	−55～+150	°C

*1 : Allowable value per unit *2 : Allowable value per package

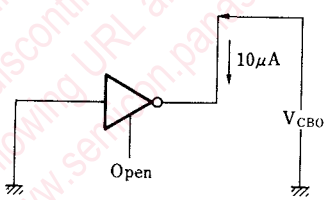
■Electrical Characteristics (Ta=25°C)

Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Collector/Emitter Voltage	V_{CEO}	1	I_C=10μA, I_E=0	50			V
Collector Base Voltage	V_{CBO}	2	I_C=1mA, I_I=0	30			V
Collector Leakage Current	I_{CEO}	3	V_{CE}=30V, I_J=0			1	μA
Collector/Emitter Saturation Voltage	$V_{CE(sat)1}$	4	I_C=5mA, V_I=5V		0.8	1	V
	$V_{CE(sat)2}$	4	I_C=25mA, V_I=15V		1.0	1.2	V
Input Voltage	V_{I1}	5	I_C=5mA, V_{CE}=1.2V		1.55	1.6	V
	V_{I2}	5	I_C=25mA, V_{CE}=1.4V		1.7	2.3	V
Input Current	I_{I1}	6	I_C=5mA, V_I=5V		140	180	μA
	I_{I2}	6	I_C=25mA, V_I=15V		0.5	0.6	mA

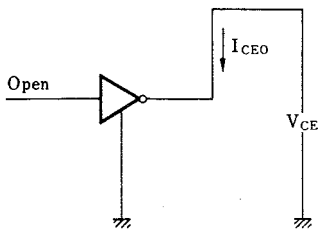
Test Circuit 1 (V_{CEO})



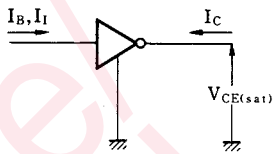
Test Circuit 2 (V_{CBO})



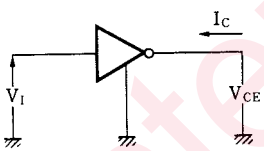
Test Circuit 3 (I_{CEO})



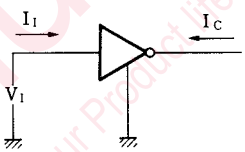
Test Circuit 4 ($V_{CE(sat)}$)



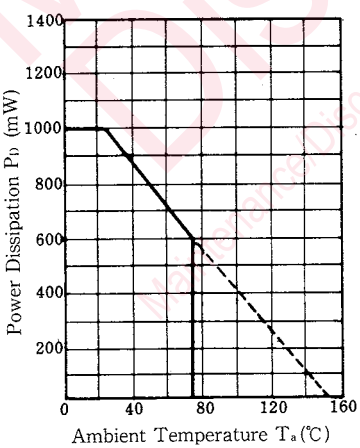
Test Circuit 5 (V_I)



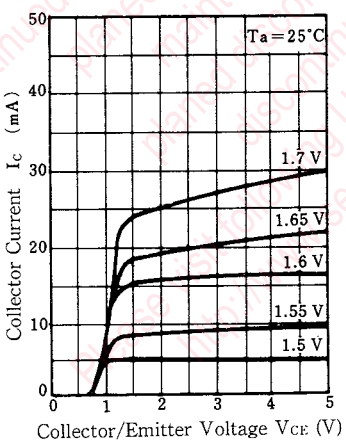
Test Circuit 6 (I_I)



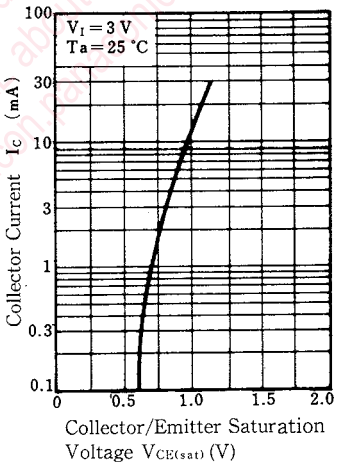
$P_D - Ta$



$I_C - V_{CE}$



$I_C - V_{CE(sat)}$



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