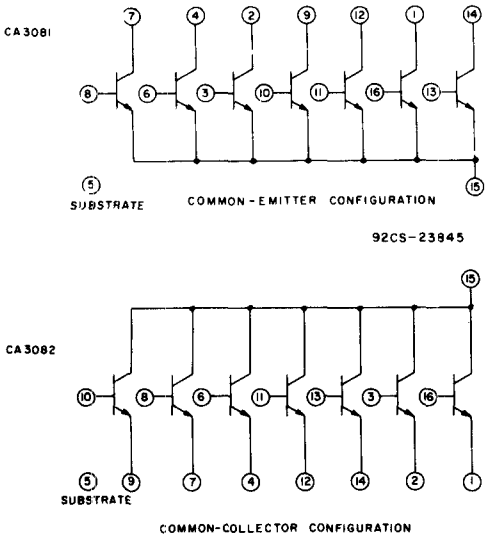
General-Purpose High-Current n-p-n Transistor Arrays

CA3081
CA3082



Package	Suffix	T_A (°C)
16-Lead DIP	None	–55 to 125
16-Lead Frit Seal	F	
Chip	H	Page 59

File No. 480*

Applications and Features

Drivers for:
7-segment incandescent displays (e.g. RCA NUMITRON DR2000 Series)
Light-Emitting-Diodes (LED) displays (e.g. RCA 40736R)

7 transistors permit a wide range of applications in either a common-emitter (CA3081) or common-collector (CA3082) configuration

High I_C: 100 mA max.
Low $V_{CE\ sat}$ (at 50 mA): 0.4V typ. — *Relay control*
h_{FE} = 40 min at I_C = 50 mA — Thyristor firing

Maximum Ratings at T_A = 25°C

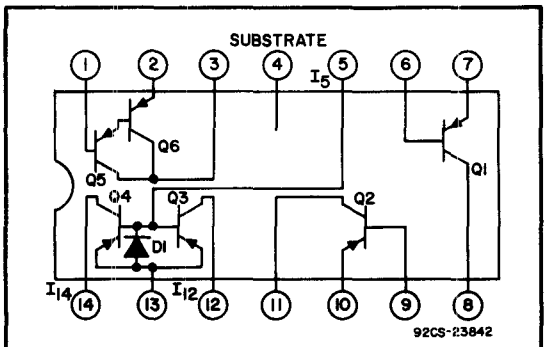
The following maximum ratings apply for each transistor in the array.

Collector-to-Emitter Voltage	15	V
Collector-to-Base Voltage	20	V
Collector-to-Substrate* Voltage	20	V
Emitter-to-Base Voltage	5	V
Collector Current	100	mA
Power Dissipation	500	mW

*The collector of each transistor is isolated from the substrate by an integral diode.

General-Purpose p-n-p Transistor Array

CA3084



Package	Suffix	T_A (°C)
14-Lead DIP	None	–55 to 125
Beam Lead	L	Page 59
Chip	H	Page 59

File No. 482*

Applications and Features

Matched transistor pair (Q1 & Q2)
V_{IO} (V_{BE} matched): ±6 mV max.
I_{IO} (at 100μA): ±0.6 μA
h_{FE} = 100 min. at I_E = 0.1 mA
Wide operating-current range
Low noise figure: –3.2 dB typ. at 1 kHz
Darlington transistor pair (Q5 and Q6)
Current-mirror pair (Q3 & Q4)

General use in systems having low-power and low-frequency requirements
Differential amplifiers
Temperature-compensated amplifiers
Active loads for differential amplifiers using n-p-n transistors (current mirror)
Complementary uses with RCA n-p-n transistor arrays

Maximum Ratings at T_A = 25°C

The following maximum ratings apply for each transistor in the array:

Collector-to-Emitter Voltage	–40	V
Collector-to-Base Voltage	–40	V
Collector-to-Substrate* Voltage	–40	V
Emitter-to-Base Voltage	–40	V
Collector Current	–10	mA
Power Dissipation	200	mW

*The collector of each transistor is isolated from the substrate by an integral diode.

*Refer to indicated File No. for data bulletin and where given to indicated ICAN No. for application note.