N-P-N/P-N-P Transistor Array

Five-Independent Transistors: Three n-p-n and Two p-n-p

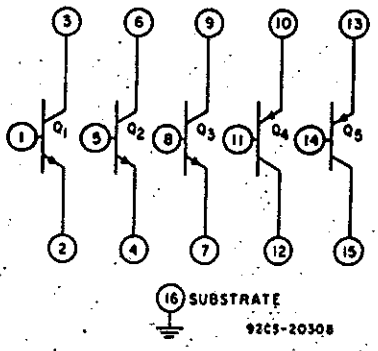
Applications:

- *Differential Amplifiers*
- *DC Amplifiers*
- *Sense Amplifiers*
- *Level Shifters*
- *Timers*
- *Lamp and Relay Drivers*
- *Thyristor Firing Circuits*
- *Temperature-Compensated Amplifiers*
- *Operational Amplifiers*

RCA-CA3096CE, CA3096E, and CA3096AE are general-purpose high-voltage silicon transistor arrays. Each array consists of five independent transistors (two p-n-p and three n-p-n types) on a common substrate, which has a separate connection. Independent connections for each transistor permit maximum flexibility in circuit design.

Types CA3096AE, CA3096E, and CA3096CE are identical, except that the CA3096AE specifications include parameter matching and greater stringency in I_{CBO}, I_{CEO}, and $V_{CE(SAT)}$. The CA3096CE is a relaxed version of the CA3096E.

The CA3096CE, CA3096E, and CA3096AE are supplied in 16-lead dual-in-line plastic packages. (E-suffix). The CA3096 is also available in chip form. (H suffix).



Schematic Diagram

CA3096AE, CA3096E, CA3096CE
ESSENTIAL DIFFERENCES

CHARACTERISTIC		CA3096AE	CA3096E	CA3096CE
$V_{(BR)CEO}$ (V) Min.	n-p-n	35	35	24
	p-n-p	−40	−40	−24
$V_{(BR)CBO}$ (V) Min.	n-p-n	45	45	30
	p-n-p	−40	−40	−24
h_{FE} @ 1 mA	n-p-n	150-500	150-600	100-670
	p-n-p	20-150	20-150	15-200
h_{FE} @ 100 μA	p-n-p	40-200	40-200	30-300
I_{CBO} (nA) Max.	n-p-n	40	100	100
	p-n-p	−40	−100	−100
I_{CEO} (nA) Max.	n-p-n	100	1000	1000
	p-n-p	−100	−1000	−1000
$V_{CE(SAT)}$ (V) Max.	p-n-p	0.5	0.7	0.7
$\lvert V_{IO}\rvert$ (mV) Max.	n-p-n	5	–	–
	p-n-p	5	–	–
$\lvert I_{IO}\rvert$ (μA) Max.	n-p-n	0.6	–	–
	p-n-p	0.25	–	–

File Number **595**