

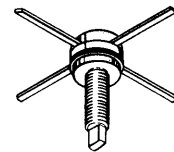
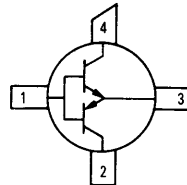
*Advance Information*  
**The RF Line**  
**High Frequency**  
**Complementary Pair**  
**Transistor Array**

**CR820**

**HIGH FREQUENCY**  
**COMPLEMENTARY PAIR**  
**TRANSISTOR ARRAY**  
**NPN/PNP SILICON**

... designed for use as an output device in very fast video amplifier circuits. The CR820 transistor array is a complementary pair of silicon bipolar transistors connected as emitter followers. Their primary application will be in black and white video monitors and other uses where discrete steps of brightness are required.

- High Voltage —  $V_{(BR)CBO} = 70$  V Min
- High Frequency —  $f_T = 1000$  MHz
- Low Output Capacitance —  $C_{cb} = 2.5$  pF Max @  $V_{CB} = 15$  V
- Gold Metallization
- Common-Base Common-Emitter Configuration



**CASE 244D-01, STYLE 3**

**MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CEO}$	65	V
Collector-Base Voltage	$V_{CBO}$	70	V
Collector Current — Continuous	$I_C$	400	mA
Operating Junction Temperature	$T_J$	200	°C
Storage Temperature Range	$T_{stg}$	-65 to +200	°C

**THERMAL CHARACTERISTICS**

Thermal Resistance, Junction to Case	$R_{\theta JC}$	25	°C/W
--------------------------------------	-----------------	----	------

**ELECTRICAL CHARACTERISTICS** ( $T_C = 25^\circ\text{C}$  unless otherwise noted)

Characteristics	Pins	Symbol	Min	Typ	Max	Unit
-----------------	------	--------	-----	-----	-----	------

**OFF CHARACTERISTICS**

Collector-Emitter Breakdown Voltage ( $I_C = 1$ mA, $I_B = 0$ )	4-3	$V_{(BR)CE01}$	70	—	—	V
	2-3	$V_{(BR)CE02}$	-65	—	—	V
Collector-Base Breakdown Voltage ( $I_C = 0.1$ mA, $I_E = 0$ )	4-1	$V_{(BR)CBO1}$	120	—	—	V
	2-1	$V_{(BR)CBO2}$	-80	—	—	V

**ON CHARACTERISTICS**

DC Current Gain ( $I_C = 50$ mA, $V_{CE} = 5$ V)	4-1-3	$H_{fe1}$	20	—	60	—
	2-1-3	$H_{fe2}$	20	—	60	—
Base-Emitter Forward Voltage ( $I_B = 1$ mA, $-1$ mA)	1-3	$V_{(BR)CBO}$	—	+0.7, -0.7	—	V

**DYNAMIC CHARACTERISTICS**

Collector-Base Capacitance ( $V_{CB} = 15$ V)	4-1	$C_{cb1}$	—	—	2.5	pF
	2-1	$C_{cb2}$	—	—	2.5	pF
Cutoff Frequency ( $I_C = 50$ mA, $V_{CE} = 15$ V)	4-1-3	$F_{r1}$	1.0	—	—	GHz
	2-1-3	$F_{r2}$	1.0	—	—	GHz

This document contains information on a new product. Specifications and information herein are subject to change without notice.