

T-43-25

MOTOROLA

SEMICONDUCTOR

TECHNICAL DATA

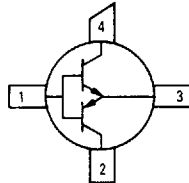
Advance Information

The RF Line

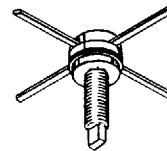
High Frequency Complementary Pair Transistor Array

... 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


CR820

HIGH FREQUENCY
COMPLEMENTARY PAIR
TRANSISTOR ARRAY
NPN/PNP SILICON



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

Characteristics	Pins	Symbol	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage ($I_C = 1$ mA, $I_B = 0$)	4-3	$V_{(BR)CEO1}$	70	—	—	V
	2-3	$V_{(BR)CEO2}$	-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}	10	—	—	GHz
	2-1-3	F_{r2}	10	—	—	GHz

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