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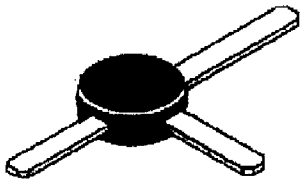
BFR96

RF & MICROWAVE DISCRETE LOW POWER TRANSISTORS

Features

- High Current-Gain – Bandwidth Product, fT = 4.5 GHz (typ) @ IC = 50 mA
- Low Noise Figure – NF = 2.4 dB (typ) @ f = 0.5 GHz
- High Power Gain – Gmax = 14.5dB (typ) @ f = 0.5 GHz



Macro T
(STYLE #2)

DESCRIPTION: Designed primarily for use in high-gain, low noise, small-signal amplifiers. Also used in applications requiring fast switching times.

ABSOLUTE MAXIMUM RATINGS (Tcase = 25°C)

Symbol	Parameter	Value	Unit
V_{CEO}	Collector-Emitter Voltage	15	Vdc
V_{CBO}	Collector-Base Voltage	20	Vdc
V_{EBO}	Emitter-Base Voltage	3.0	Vdc
I_C	Collector Current	100	mA

Thermal Data

P_D	Total Device Dissipation @ TC = 100°C Derate above 100°C	500 10	mWatts mW/ °C

BFR96

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

(off)

Symbol	Test Conditions	Value			
		Min.	Typ.	Max.	Unit
BVCEO	Collector-Emitter Breakdown Voltage (IC = 1.0 mAdc, IB = 0)	15	-	-	Vdc
BVCB0	Collector-Base Breakdown Voltage (IC = 0.1 mAdc, IE = 0)	20	-	-	Vdc
BVEBO	Emitter-Base Breakdown Voltage (IE = 0.1 mAdc, IC = 0)	3.0	-	-	Vdc
ICBO	Collector Cutoff Current (VCB = 10 Vdc, VBE = 0 Vdc)	-	-	100	nA

(on)

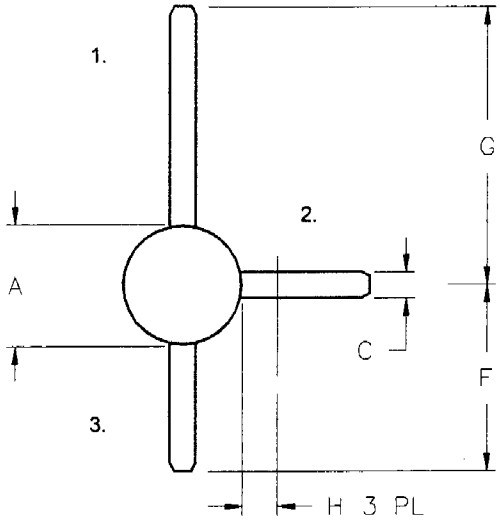
HFE	DC Current Gain (IC = 50 mAdc, VCE = 10 Vdc)	30	-	200	-

DYNAMIC

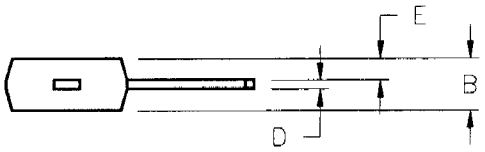
Symbol	Test Conditions	Value			
		Min.	Typ.	Max.	Unit
Ftau	Current-Gain – Bandwidth Product (IC = 50 mA, VCE = 10 Vdc, f = 0.5 GHz)	-	5.0	-	GHz
CCB	Output Capacitance (VCB = 10 Vdc, IE = 0, f = 1.0 MHz)	-	2.6	3.2	pF

PACKAGE STYLE M236

PIN 1. COLLECTOR
2. EMITTER
3. BASE



MACRO-T



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.175/4,45	.205/5,21			
B	.075/1,91	.100/2,54			
C	.033/0,84	.039/0,99			
D	.008/0,20	.012/0,31			
E	.030/0,76	.045/1,14			
F	.285/7,24	.320/8,13			
G	.415/10,54	.450/11,43			
H	.065/1,65				