



PRODUCT NAME : BF494 NPN Medium Frequency Transistor

PRICE : Rs 10.00

SKU : RM1788



DESCRIPTION

Features

- Collector-Emitter Volt (V_{ce0}): 20V
- Collector-Base Volt (V_{cb0}): 30V
- Collector Current (I_c): 0.03A
- h_{fe} : 67-220 @ 1mA
- Power Dissipation (P_{tot}): 300mW
- Current-Gain-Bandwidth (f_{total}): 120MHz
- Type: PNP

NPN medium frequency transistors

BF494; BF495

FEATURES

- Low current (max. 30 mA)
- Low voltage (max. 20 V).

APPLICATIONS

- HF applications in radio and television receivers
- FM tuners
- Low noise AM mixer-oscillators
- IF amplifiers in AM/FM receivers.

DESCRIPTION

NPN medium frequency transistor in a TO-92; SOT54 plastic package.

PINNING

PIN	DESCRIPTION
1	base
2	emitter
3	collector

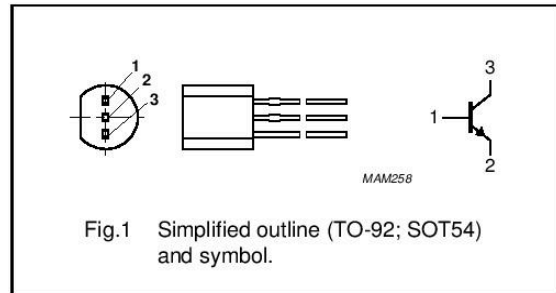


Fig.1 Simplified outline (TO-92; SOT54) and symbol.

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter	–	30	V
V_{CEO}	collector-emitter voltage	open base	–	20	V
I_{CM}	peak collector current		–	30	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25\text{ °C}$	–	300	mW
h_{FE}	DC current gain	$I_C = 1\text{ mA}; V_{CE} = 10\text{ V}$			
	BF494		67	220	
	BF495		35	125	
f_T	transition frequency	$I_C = 1\text{ mA}; V_{CE} = 10\text{ V}; f = 100\text{ MHz}$	120	–	MHz

NPN medium frequency transistors

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LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CBO}	collector-base voltage	open emitter	–	30	V
V _{CEO}	collector-emitter voltage	open base	–	20	V
V _{EBO}	emitter-base voltage	open collector	–	5	V
I _C	collector current (DC)		–	30	mA
I _{CM}	peak collector current		–	30	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	–	300	mW
T _{stg}	storage temperature		–65	+150	°C
T _J	junction temperature		–	150	°C
T _{amb}	operating ambient temperature		–65	+150	°C

Note

1. Transistor mounted on an FR4 printed-circuit board.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th j-a}	thermal resistance from junction to ambient	note 1	420	K/W

Note

1. Transistor mounted on an FR4 printed-circuit board.

CHARACTERISTICS

T_{amb} = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I _{CBO}	collector cut-off current	I _E = 0; V _{CB} = 20 V	–	100	nA
		I _E = 0; V _{CB} = 20 V; T _{amb} = 150 °C	–	4	μA
I _{EBO}	emitter cut-off current	I _C = 0; V _{EB} = 4 V	–	100	nA
h _{FE}	DC current gain BF494 BF494B BF495 BF495B	I _C = 1 mA; V _{CE} = 10 V	67	220	
			100	220	
			35	125	
			100	125	
V _{BE}	base-emitter voltage	I _C = 1 mA; V _{CE} = 10 V	650	740	mV
C _{re}	feedback capacitance	I _C = 0; V _{CB} = 10 V; f = 1 MHz	–	1	pF
f _T	transition frequency	I _C = 1 mA; V _{CE} = 10 V; f = 100 MHz	120	–	MHz

