



**PRODUCT NAME** : BFY50 NPN Medium Power Transistor

**PRICE** : Rs 49.00

**SKU** : RM1792



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## DESCRIPTION

## Features

- Collector-Emitter Volt ( $V_{ce0}$ ): 35V
- Collector-Base Volt ( $V_{cb0}$ ): 80V
- Collector Current ( $I_c$ ): 1.0A
- $h_{fe}$ : 30-112 @ 150mA
- Power Dissipation ( $P_{tot}$ ): 800mW
- Current-Gain-Bandwidth ( $f_{total}$ ): 60MHz
- Type: NPN

**NPN medium power transistors**

**BFY50; BFY51; BFY52**

**FEATURES**

- High current (max. 1 A)
- Low voltage (max. 35 V).

**APPLICATIONS**

- General purpose industrial applications.

**DESCRIPTION**

NPN medium power transistor in a TO-39 metal package.

**PINNING**

PIN	DESCRIPTION
1	emitter
2	base
3	collector, connected to case

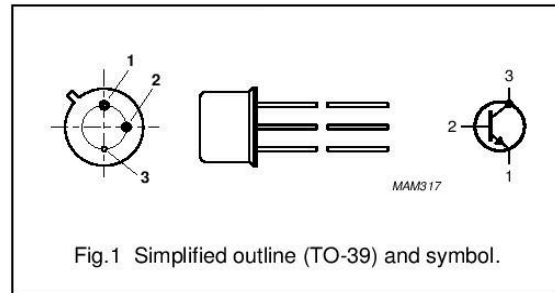


Fig.1 Simplified outline (TO-39) and symbol.

**QUICK REFERENCE DATA**

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V <sub>CBO</sub>	collector-base voltage	open emitter				
	BFY50		–	–	80	V
	BFY51		–	–	60	V
	BFY52		–	–	40	V
V <sub>CEO</sub>	collector-emitter voltage	open base				
	BFY50		–	–	35	V
	BFY51		–	–	30	V
	BFY52		–	–	20	V
I <sub>CM</sub>	peak collector current		–	–	1	A
P <sub>tot</sub>	total power dissipation	T <sub>amb</sub> ≤ 25 °C	–	–	800	mW
		T <sub>case</sub> ≤ 100 °C	–	–	2.86	W
h <sub>FE</sub>	DC current gain	I <sub>C</sub> = 150 mA; V <sub>CE</sub> = 10 V				
	BFY50		30	112	–	
	BFY51		40	123	–	
	BFY52		60	142	–	
f <sub>T</sub>	transition frequency	I <sub>C</sub> = 50 mA; V <sub>CE</sub> = 10 V; f = 100 MHz				
	BFY50		60	–	–	MHz
	BFY51; BFY52		50	–	–	MHz

**NPN medium power transistors**

**BFY50; BFY51; BFY52**

**LIMITING VALUES**

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V <sub>CBO</sub>	collector-base voltage	open emitter			
	BFY50		–	80	V
	BFY51		–	60	V
	BFY52		–	40	V
V <sub>CEO</sub>	collector-emitter voltage	open base			
	BFY50		–	35	V
	BFY51		–	30	V
	BFY52		–	20	V
V <sub>EBO</sub>	emitter-base voltage	open collector	–	6	V
I <sub>C</sub>	collector current (DC)		–	1	A
I <sub>CM</sub>	peak collector current		–	1	A
I <sub>BM</sub>	peak base current		–	100	mA
P <sub>tot</sub>	total power dissipation	T <sub>amb</sub> ≤ 25 °C	–	800	mW
		T <sub>case</sub> ≤ 25 °C	–	5	W
		25 °C < T <sub>case</sub> < 100 °C	–	2.86	W
T <sub>stg</sub>	storage temperature		–65	+150	°C
T <sub>j</sub>	junction temperature		–	200	°C
T <sub>amb</sub>	operating ambient temperature		–65	+150	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R <sub>th j-a</sub>	thermal resistance from junction to ambient	in free air	220	K/W
R <sub>th j-c</sub>	thermal resistance from junction to case		35	K/W

