

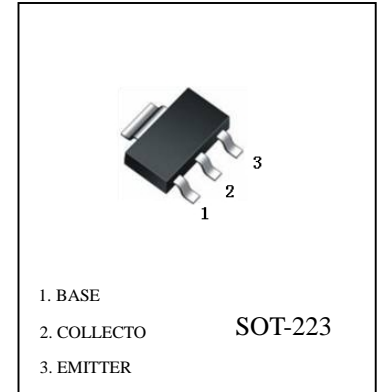
**FEATURES**

For AF driver and output stages

High collector current

Low collector-emitter saturation voltage

Complementary types: BCP54...BCP56 (NPN)

**BCP51/52/53(PNP)**


MAXIMUM RATINGS (TA=25 °C unless otherwise noted)

Parameter	Symbol	BCP51	BCP52	BCP53	Unit
Collector-Base Voltage	V <sub>CBO</sub>	-45	-60	-100	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-45	-60	-80	V
Emitter-Base Voltage	V <sub>EBO</sub>	-5			V
Collector Current -Continuous	I <sub>C</sub>	-1000			mA
Collector Power Dissipation	I <sub>C</sub>	1.5			W
Thermal Resistance Junction to Ambient	R <sub>JA</sub>	94			°C/W
Storage Temperature	T <sub>stg</sub>	-55 to +150			°C

ELECTRICAL CHARACTERISTICS (Tamb=25 °C unless otherwise specified)

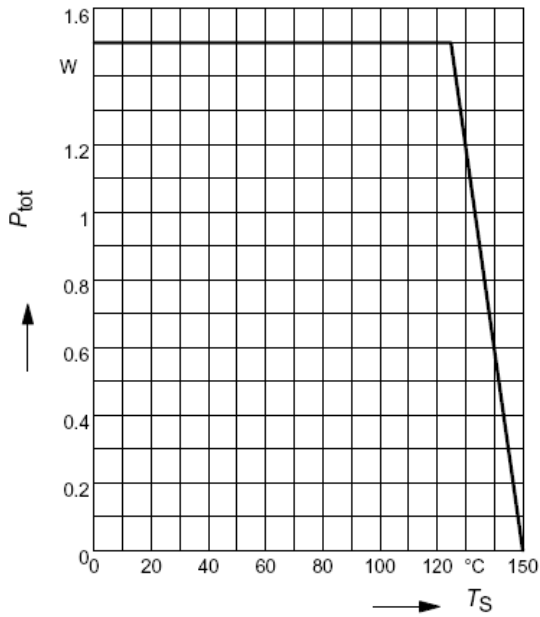
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	BCP51 BCP52 BCP53 V <sub>CBO</sub>	I <sub>C</sub> = -0.1mA, I <sub>E</sub> =0	-45 -60 -100		V
Collector-emitter breakdown voltage	BCP51 BCP52 BCP53 V <sub>CEO</sub>	I <sub>C</sub> = -10mA, I <sub>B</sub> =0	-45 -60 -80		V
Base-emitter breakdown voltage	V <sub>EBO</sub>	I <sub>C</sub> = -10μA, I <sub>E</sub> =0	-5		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = -30 V, I <sub>E</sub> =0		-100	nA
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =-2V, I <sub>C</sub> =-5mA	25		
	h <sub>FE(2)</sub>	V <sub>CE</sub> = -2V, I <sub>C</sub> =-150m A	63	250	
	h <sub>FE(3)</sub>	V <sub>CE</sub> = -2V, I <sub>C</sub> =-500m A	25		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA		-0.5	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> =-2V, I <sub>C</sub> =-500m A		-1	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-10V, I <sub>C</sub> =-50mA, f=100MHz	100		MHz

CLASSIFICATION OF h<sub>FE(2)</sub>

Rank	BCP51-10, BCP52-10, BCP53-10	BCP51-16, BCP52-16, BCP53-16
Range	63-160	100-250

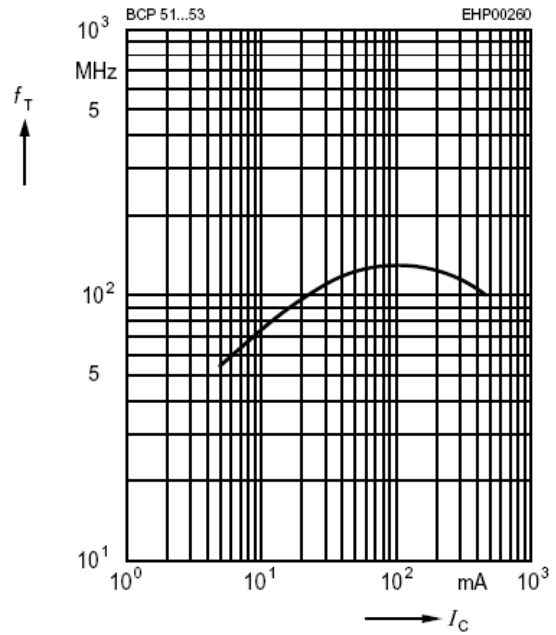
**BCP51/52/53 Typical Characteristics**

**Total power dissipation  $P_{tot} = f(T_S)$**



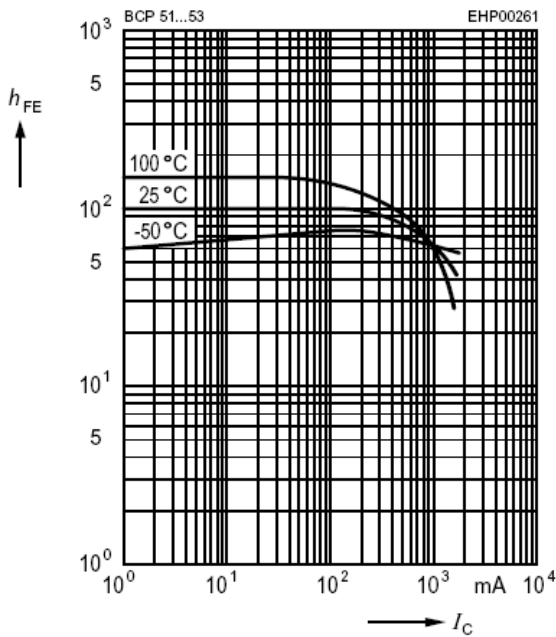
**Transition frequency  $f_T = f(I_C)$**

$V_{CE} = 10V$



**DC current gain  $h_{FE} = f(I_C)$**

$V_{CE} = 2V$



**Collector cutoff current  $I_{CBO} = f(T_A)$**

$V_{CB} = 30V$

