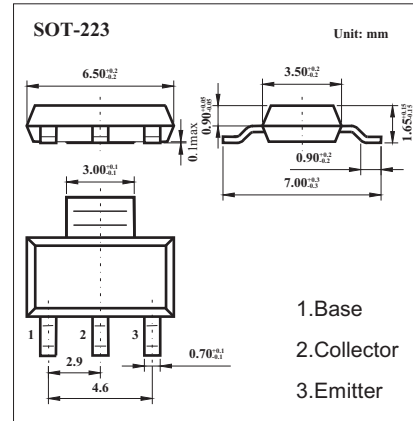


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■ Features

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage (open emitter)	V _{CB0}	-100	V
Collector-emitter voltage(open base)	V _{CEO}	-80	V
Emitter-base voltage(open collector)	V _{EBO}	-5	V
Collector current	I _c	-1	A
power dissipation	P _D	1.5	W
thermal resistance from junction to ambient	R _{θJA}	83.3	°C/W
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-65 to +150	°C

■ Electrical Characteristics Ta = 25°C

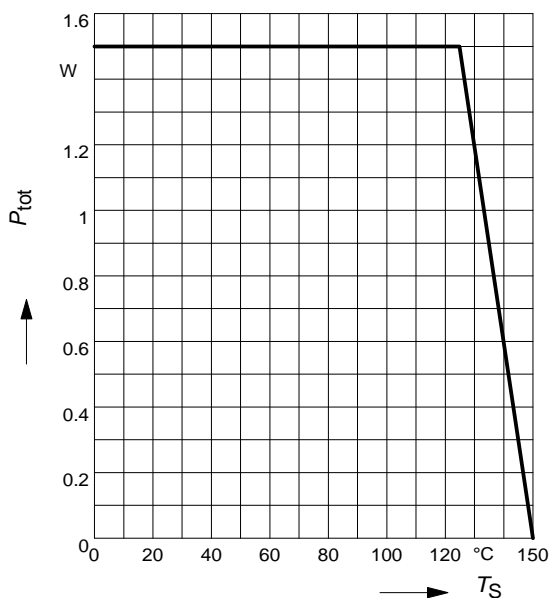
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _c = -0.1mA, I _E = 0	-100			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _c = -10mA, I _B = 0	-80			V
Base-emitter breakdown voltage	V _{(BR)EBO}	I _c = -10μA, I _E = 0	-5			V
Collector cutoff current	I _{CBO}	V _{CB} = -30 V, I _E = 0			-100	nA
Emitter cutoff current	I _{EBO}	V _{EB} = -5 V, I _c = 0			-100	nA
DC current gain	h _{FE}	I _c = -5 mA; V _{CE} = -2 V	25			
		I _c = -150 mA; V _{CE} = -2 V	100		250	
		I _c = -500 mA; V _{CE} = -2 V	25			
Collector-emitter saturation voltage	V _{CE(sat)}	I _c = -500 mA; I _B = -50 mA			-0.5	V
Base to emitter voltage	V _{BE}	I _c = -500 mA; V _{CE} = -2 V			-1	V
Transition frequency	f _T	I _c = -50 mA; V _{CE} = -10 V; f = 100 MHz	100			MHz

■ Marking

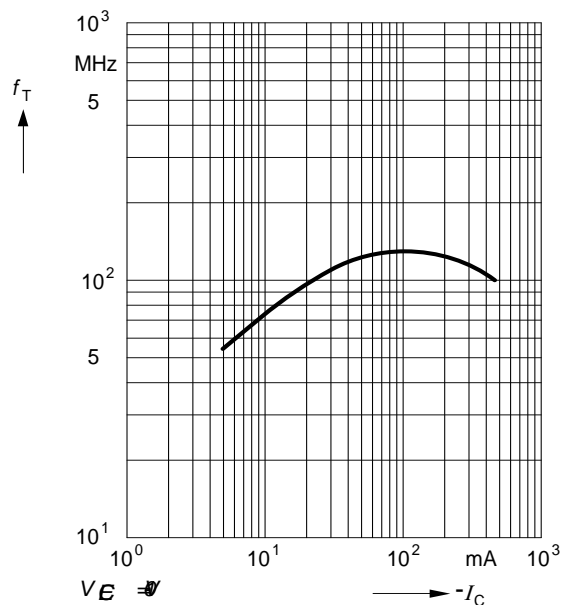
Marking	BCP53
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KCP53-16

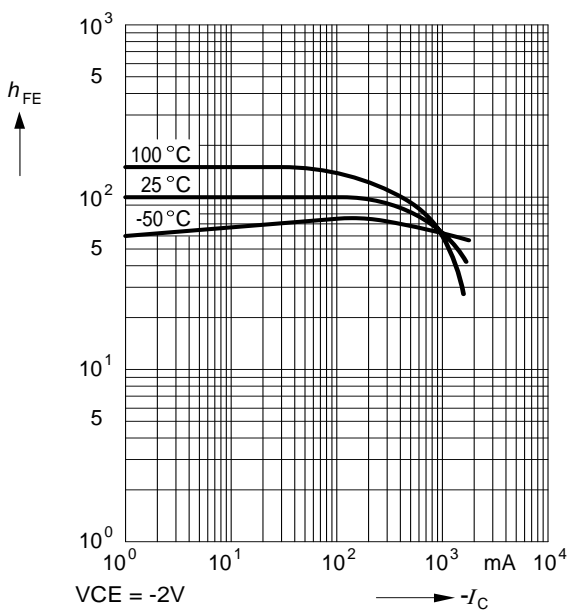
■ Typical Characteristics



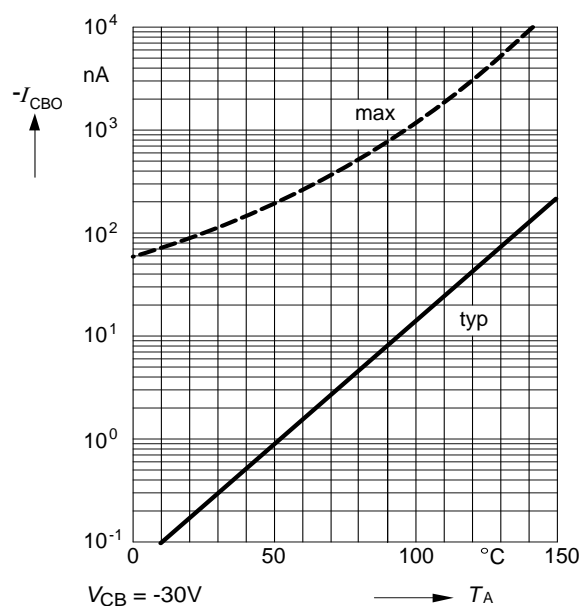
Total power dissipation $P_{tot} = f(T_S)$



Transition frequency $f_T = f(-I_C)$



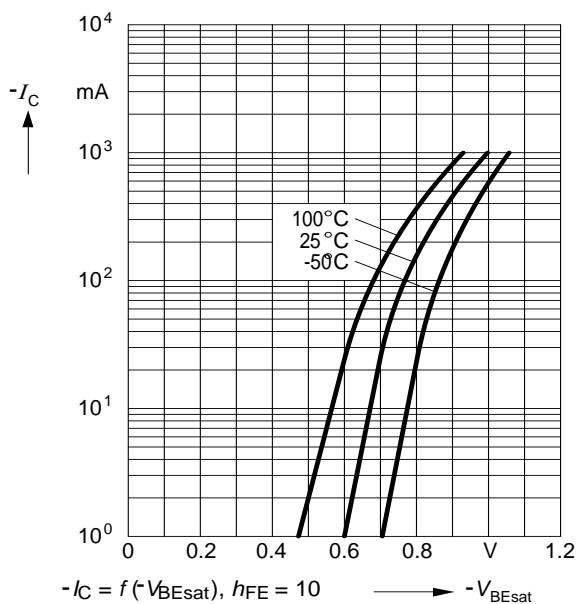
DC current gain $h_{FE} = f(-I_C)$



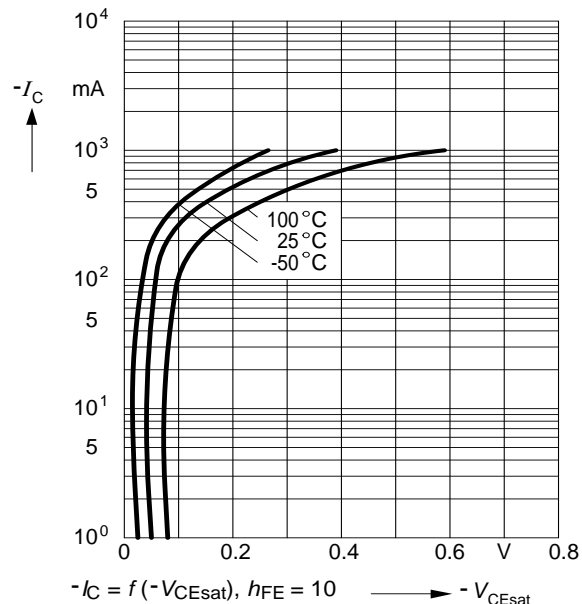
Collector cutoff current $I_{CBO} = f(T_A)$



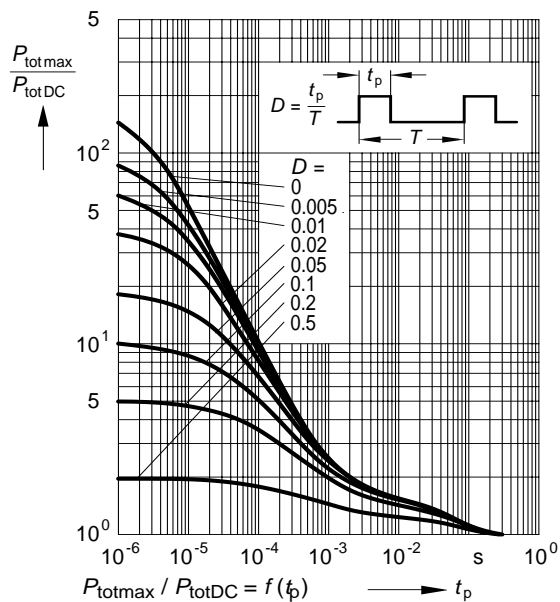
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Base-emitter saturation voltage



Collector-emitter saturation voltage



Permissible pulse load