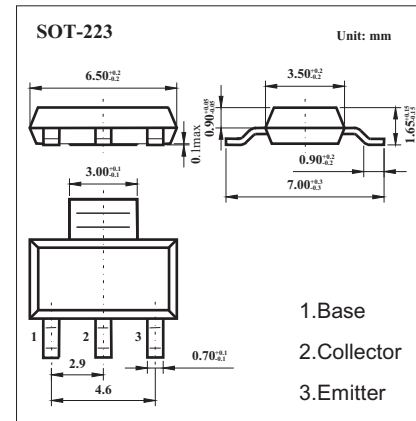


PNP Medium Power Transistors

KCP53-16

■ Features

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



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage (open emitter)	V_{CB0}	-100	V
Collector-emitter voltage(open base)	V_{CE0}	-80	V
Emitter-base voltage(open collector)	V_{EB0}	-5	V
Collector current	I_c	-1	A
power dissipation	P_D	1.5	W
thermal resistance from junction to ambient	$R_{\theta JA}$	83.3	$^\circ\text{C}/\text{W}$
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-65 to +150	$^\circ\text{C}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

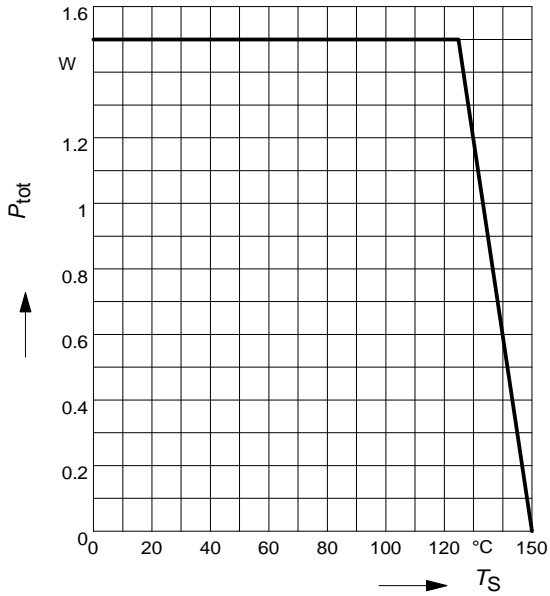
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_c = -0.1\text{mA}, I_E = 0$	-100			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_c = -10\text{mA}, I_B = 0$	-80			V
Base-emitter breakdown voltage	$V_{(BR)EBO}$	$I_c = -10\mu\text{A}, I_E = 0$	-5			V
Collector cutoff current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$			-100	nA
Emitter cutoff current	I_{EBO}	$V_{EB} = -5\text{V}, I_c = 0$			-100	nA
DC current gain	h_{FE}	$I_c = -5\text{mA}; V_{CE} = -2\text{V}$	25			
		$I_c = -150\text{mA}; V_{CE} = -2\text{V}$	100		250	
		$I_c = -500\text{mA}; V_{CE} = -2\text{V}$	25			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = -500\text{mA}; I_B = -50\text{mA}$			-0.5	V
Base to emitter voltage	V_{BE}	$I_c = -500\text{mA}; V_{CE} = -2\text{V}$			-1	V
Transition frequency	f_T	$I_c = -50\text{mA}; V_{CE} = -10\text{V}; f = 100\text{MHz}$	100			MHz

■ Marking

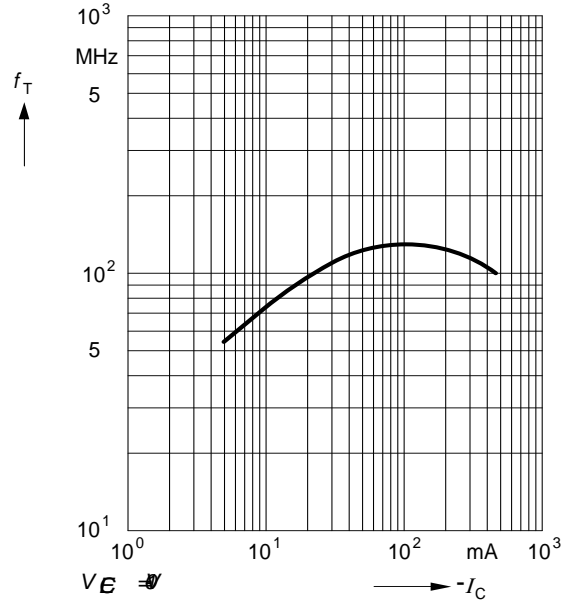
Marking	BCP53
---------	-------

KCP53-16

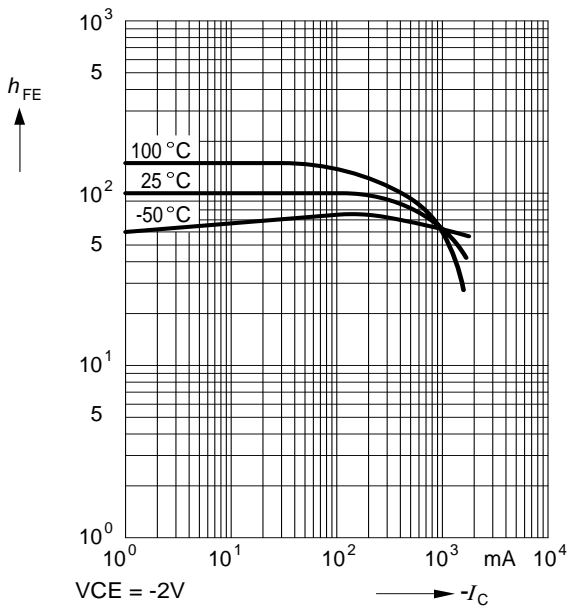
■ Typical Characteristics



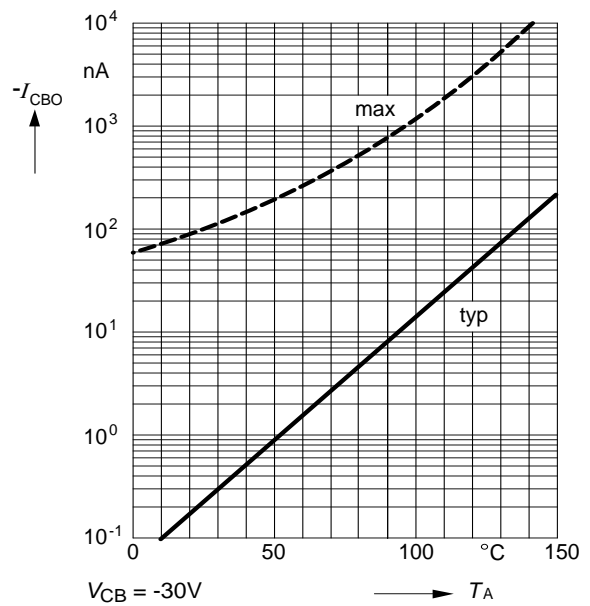
Total power dissipation $P_{tot} = f(T_S)$



Transition frequency $f_T = f(-I_C)$

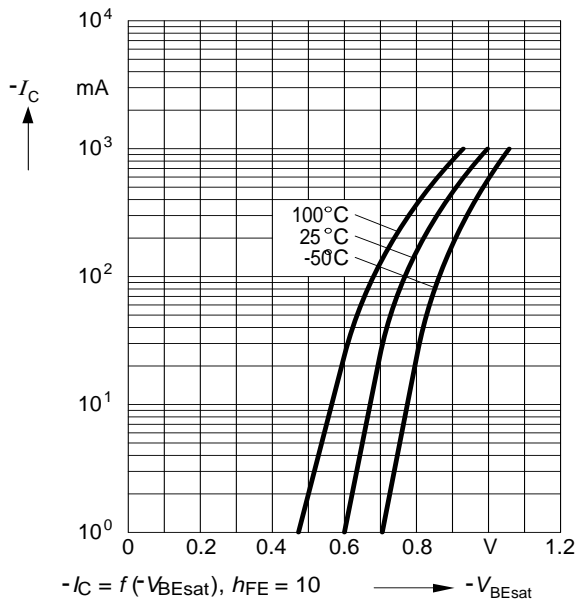


DC current gain $h_{FE} = f(-I_C)$

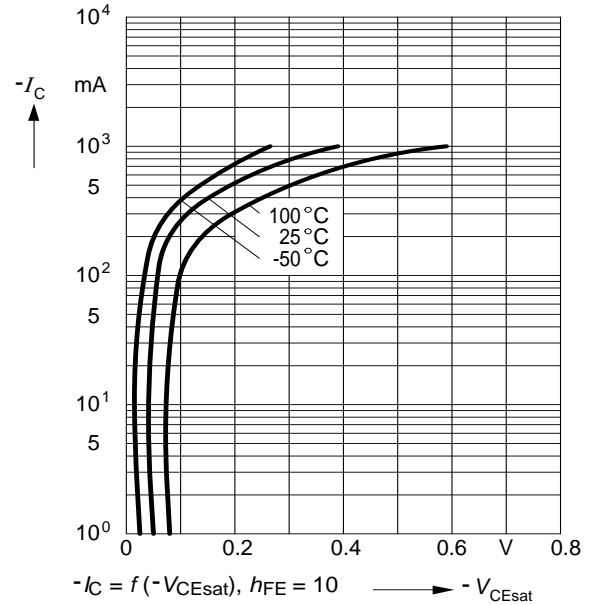


Collector cutoff current $I_{CBO} = f(T_A)$

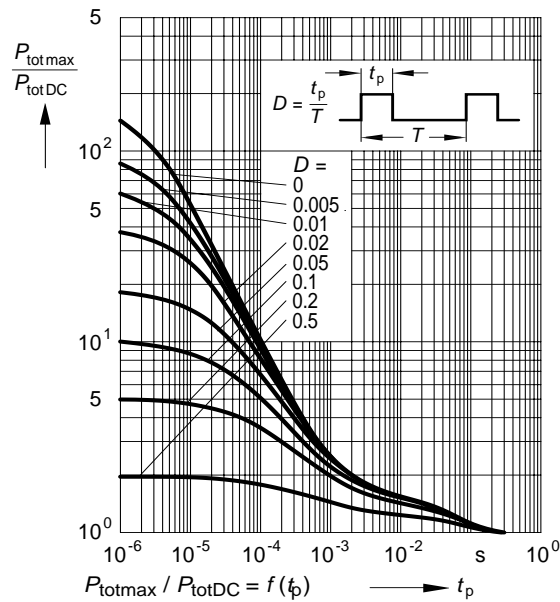
KCP53-16



Base-emitter saturation voltage



Collector-emitter saturation voltage



Permissible pulse load