

FTB1412D TRANSISTOR (PNP)

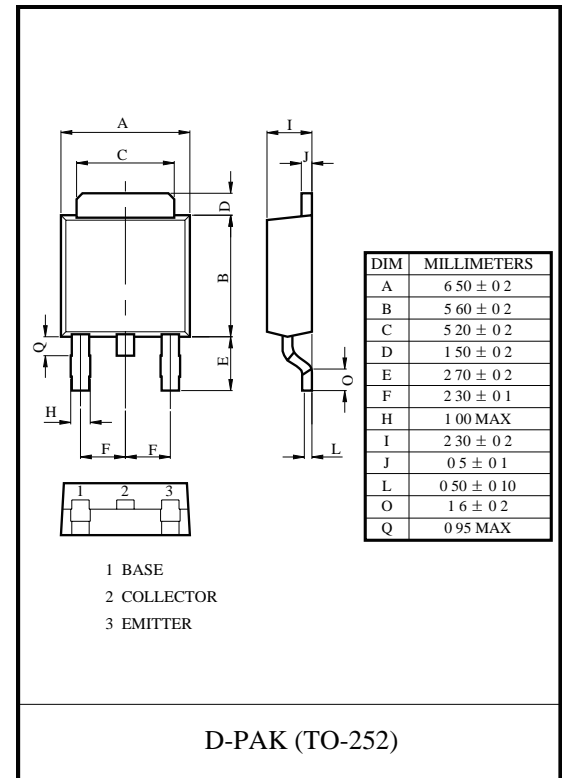
FEATURES

Power Amplifier Applications

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

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	-30	V
V _{CER}	Collector-Emitter Voltage	-30	V
V _{EBO}	Emitter-Base Voltage	-6	V
I _C	Collector Current –Continuous	-5	A
P _C	Collector Power Dissipation (Note 2)	1 (T _a =25°C)	W
		10 (T _c =25°C)	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

- Note 1.** Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.
- 2.** When mounted on a 40*40*0.7mm ceramic board



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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-50μA, I _E =0	-30			V
Collector-emitter breakdown voltage	V _{(BR)CER}	I _C =-100μA	-30			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-50μA, I _C =0	-6			V
Collector cut-off current	I _{CBO}	V _{CB} =-20V, I _E =0			-0.5	μA
Emitter cut-off current	I _{EBO}	V _{EB} =-5V, I _C =0			-0.5	μA
DC current gain	h _{FE}	V _{CE} =-2V, I _C =-500mA	82		390	
Base-emitter saturation voltage	V _{BE(sat)}	I _C =-3A, I _B =-150mA		-0.9	-1.2	V
Collector-emitter saturation voltage (1)	V _{CE(sat)}	I _C =-3A, I _B =-150mA			-0.4	V
Collector-emitter saturation voltage (2)	V _{CE(sat)}	I _C =-4A, I _B =-100mA			-1.0	V
Transition frequency	f _T	V _{CE} =-6V, I _C =-50mA, f=30MHz		120		MHz
Collector output capacitance	C _{ob}	V _{CB} =-20V, I _E =0, f=1MHz		60		pF

CLASSIFICATION OF h_{FE}

Rank	P	Q	R
Range	82-180	120-270	180-390

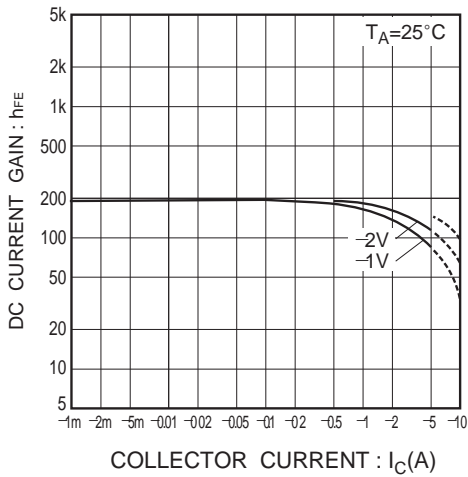


Fig.1 DC current gain vs collector current

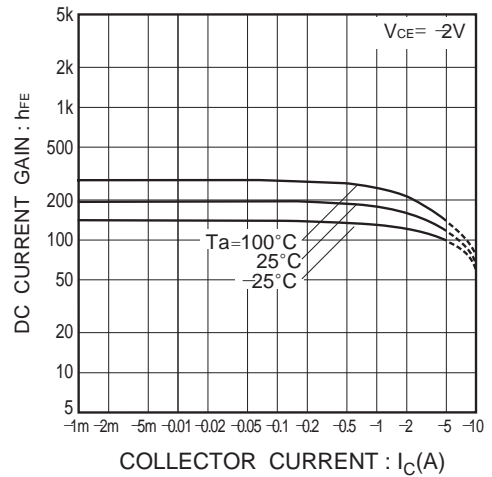


Fig.2 DC current gain vs. collector current

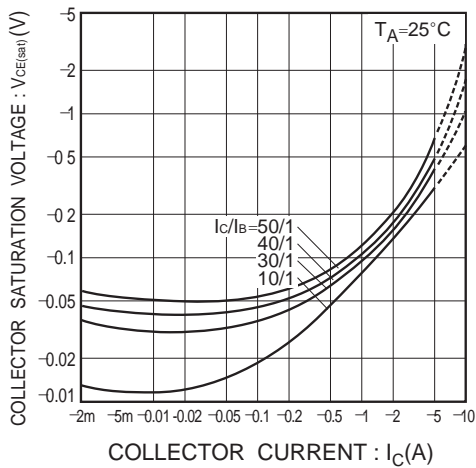


Fig.3 Collector-emitter saturation voltage vs. collector current

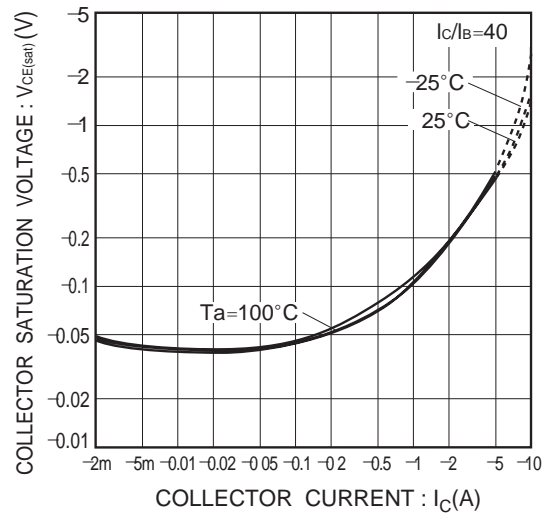


Fig.4 Collector-emitter saturation voltage vs. collector current

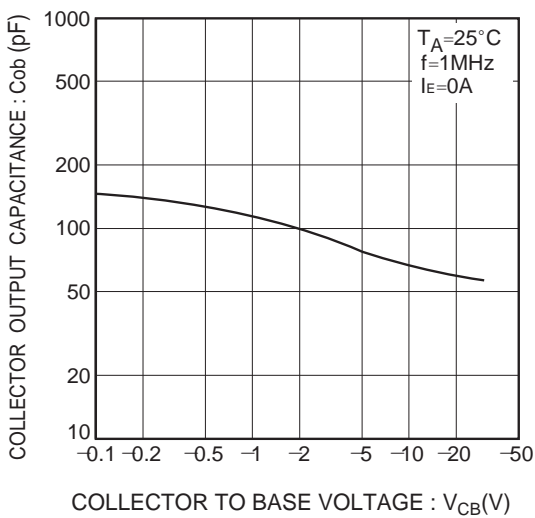


Fig.5 Collector output capacitance vs. collector-base voltage

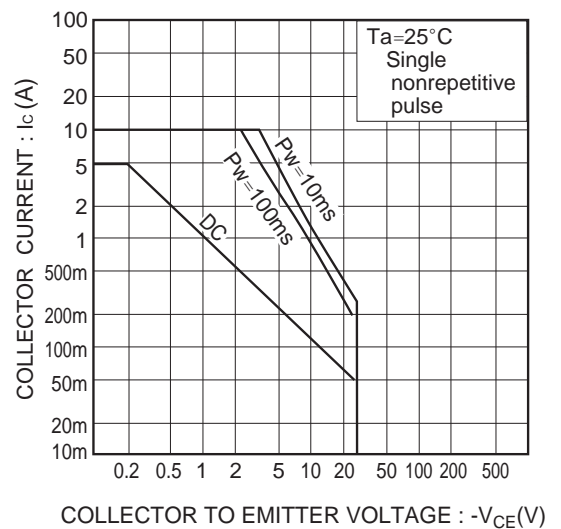


Fig.6 Safe operation area