Ordering number:EN4879

FX505

PNP Epitaxial Planar Silicon Transistor

High-Current Switching Applications

Features

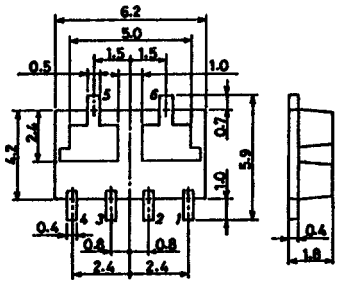
- Composite type with 2 PNP transistors contained in one package, facilitating high-density mounting.
- The FX505 houses two chips, each being equivalent to the 2SB1203, in one package.
- Matched pair characteristics.

Package Dimensions

unit:mm

2118

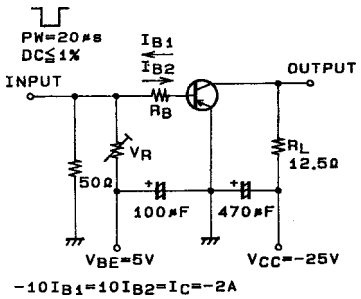
[FX505]



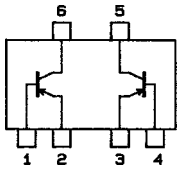
1:Base1
2:Emitter1
3:Emitter2
4:Base2
5:Collector2
6:Collector1

SANYO:XP6
(Bottom view)

Switching Time Test CIrcuit



Electrical Connection



1:Base1
2:Emitter1
3:Emitter2
4:Base2
5:Collector2
6:Collector1

(Top view)

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		–60	V
Collector-to-Emitter Voltage	V_{CEO}		–50	V
Emitter-to-Base Voltage	V_{EBO}		–6	V
Collector Current	I_C		–5	A
Collector Current (Pulse)	I_{CP}		–8	A
Base Current	I_B		–1	A
Collector Dissipation	P_C	Mounted on ceramic board (750mm²×0.8mm) 1 unit	1.5	W
Total Dissipation	P_T	Mounted on ceramic board (750mm²×0.8mm)	2	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

· Marking:505

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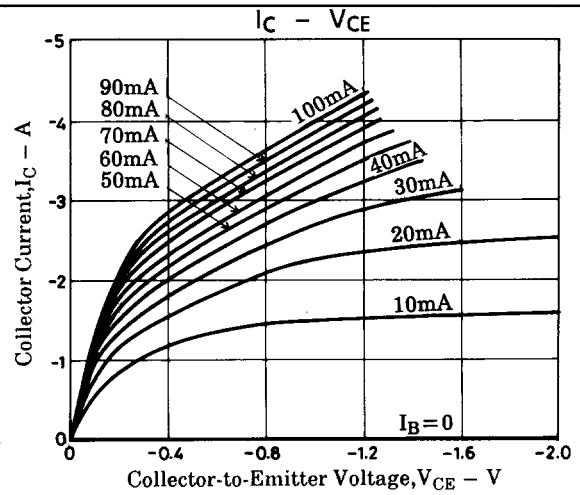
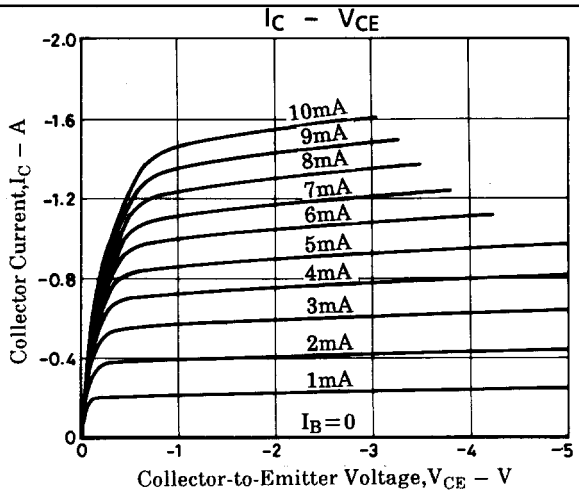
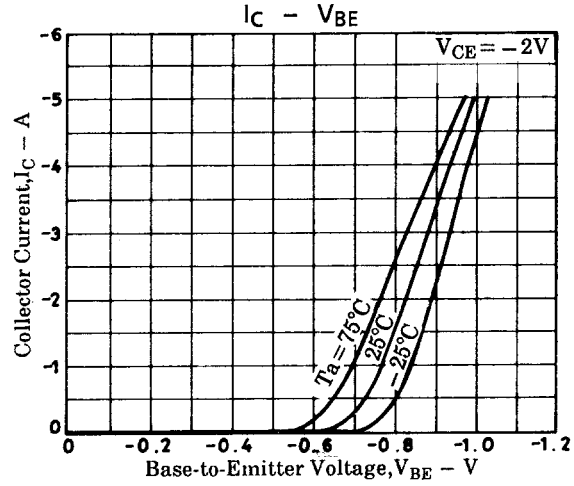
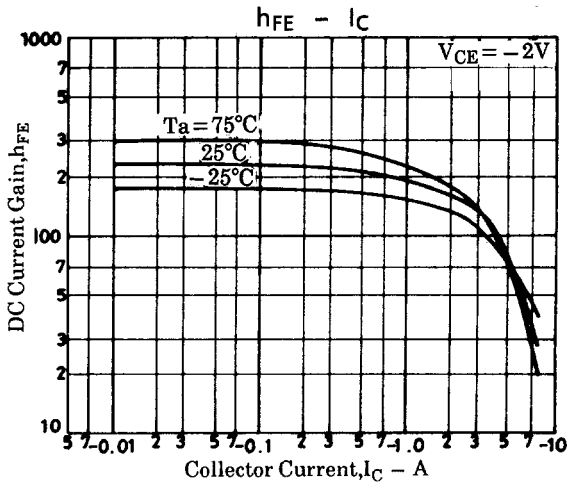
Electrical Characteristics at Ta = 25˚C

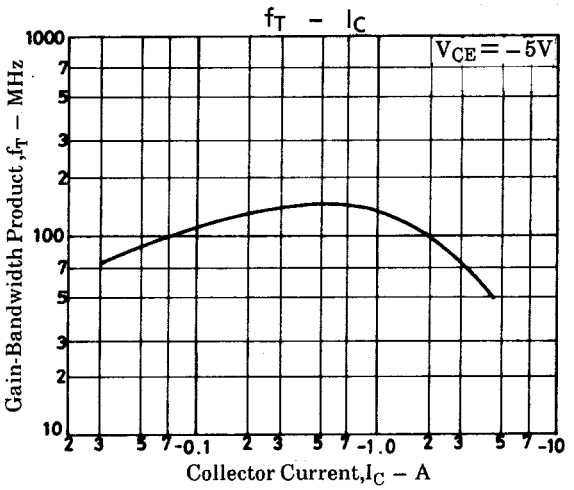
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=–40V, I_E=0			–1	µA
Emitter Cutoff Current	I_{EBO}	V_{EB}=–4V, I_C=0			–1	µA
DC Current Gain	$h_{FE}1$	V_{CE}=–2V, I_C=—500mA	140		400	
	$h_{FE}2$	V_{CE}=–2V, I_C=–4A	35			
DC Current Gain Ratio	$h_{FE(small/large)}$	V_{CE}=–2V, I_C=–500mA	0.8			
Gain-Bandwidth Product	f_T	V_{CE}=–5V, I_C=–500mA		150		MHz
Output Capacitance	Cob	V_{CB}=–10V, f=1MHz		60		pF
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=–3A, I_B=–150mA		–280	–550	mV
B-E Saturation Voltage	$V_{BE(sat)}$	I_C=–3A, I_B=–150mA		–0.95	–1.3	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=–10µA, I_E=0	–60			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=–1mA, R_{BE}=∞	–50			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E=–10µA, I_C=0	–6			V
Turn-ON Time	t_{on}	See sepcified Test Circuit		50		ns
Storage Time	tstg	See sepcified Test Circuit		450		ns
Fall Time	t_f	See sepcified Test Circuit		20		ns

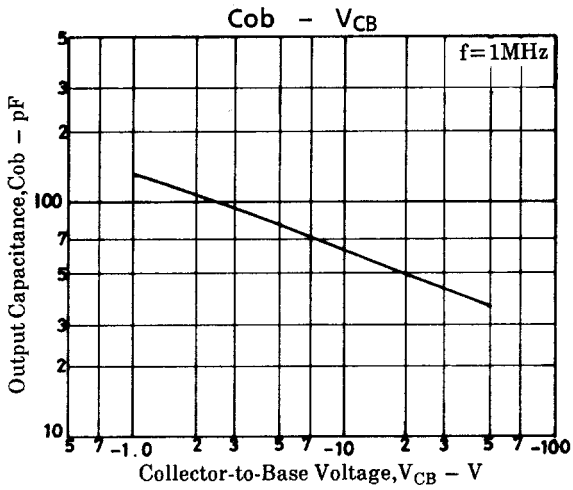

IC – VCE
90mA
80mA
70mA
60mA
50mA
100mA
40mA
30mA
20mA
10mA
IB=0
Collector Current,IC – A
Collector-to-Emitter Voltage,VCE – V

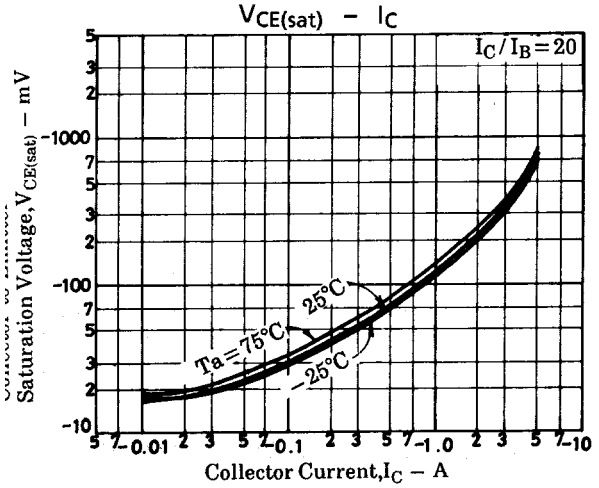

IC – VCE
10mA
9mA
8mA
7mA
6mA
5mA
4mA
3mA
2mA
1mA
IB=0
Collector Current,IC – A
Collector-to-Emitter Voltage,VCE – V

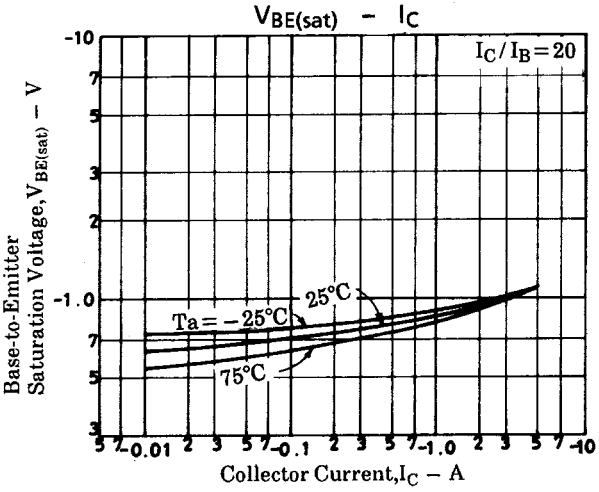

IC – VBE
VCE=–2V
Ta=75°C
25°C
–25°C
Collector Current,IC – A
Base-to-Emitter Voltage,VBE – V


hFE – IC
VCE=–2V
Ta=75°C
25°C
–25°C
DC Current Gain,hFE
Collector Current,IC – A


fT – IC
VCE=–5V
Gain-Bandwidth Product,fT – MHz
Collector Current,IC – A


Cob – VCB
f=1MHz
Output Capacitance,Cob – pF
Collector-to-Base Voltage,VCB – V


VCE(sat) – IC
IC/IB=20
Ta=75°C
25°C
–25°C
Saturation Voltage,VCE(sat) – mV
Collector Current,IC – A


VBE(sat) – IC
IC/IB=20
Ta=–25°C
25°C
75°C
Base-to-Emitter Saturation Voltage,VBE(sat) – V
Collector Current,IC – A