



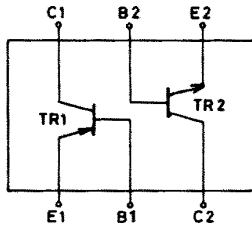
FC150

PNP/NPN Epitaxial Planar Silicon Composite Transistor Low-Frequency General-Purpose Amp, Driver Applications

Features

- Composite type with 2 transistors contained in the CP package currently in use, improving the mounting efficiency greatly.
- The FC150 is formed with two chips, being equivalent to the 2SA1813/2SC4413, placed in one package.
- Adoption of FBET process.
- High DC current gain.
- High V_{EBO} .

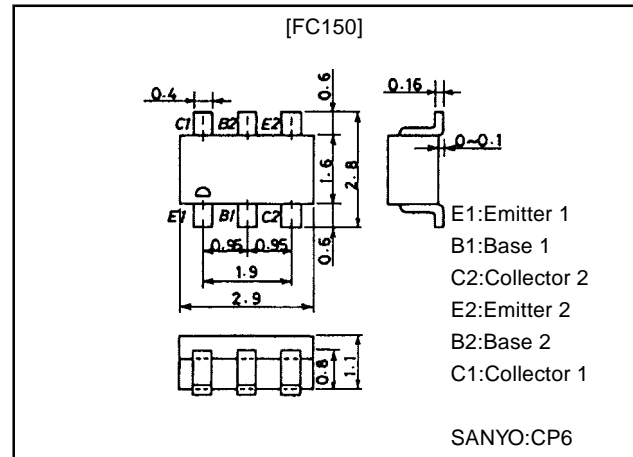
Electrical Connection



TR1=PNP
TR2=NPN

Package Dimensions

unit:mm
2067



Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-30)60	V
Collector-to-Emitter Voltage	V_{CEO}		(-25)50	V
Emitter-to-Base Voltage	V_{EBO}		(-)15	V
Collector Current	I_C		(-150)100	mA
Collector Current (Pulse)	I_{CP}		(-300)200	mA
Base Current	I_B		(-30)20	mA
Collector Dissipation	P_C	1 unit	200	mW
Total Dissipation	P_T		300	mW
Junction Temperature	T_j		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-20\text{V})40\text{V}$, $I_E=0$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-10\text{V})$, $I_C=0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=(-5\text{V})$, $I_C=(-1\text{mA})$	(500)800	(800)1500	(1200)3200	
Gain-Bandwidth Product	f_T	$V_{CE}=(-10\text{V})$, $I_C=(-10\text{mA})$		(210)200		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-10\text{V})$, $f=1\text{MHz}$		(2.6)1.5		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-50\text{mA})$, $I_B=(-1\text{mA})$		(-0.15)0.1	(-)0.3	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=(-50\text{mA})$, $I_B=(-1\text{mA})$		(-0.78)0.8	(-)1.1	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-10\mu\text{A})$, $I_E=0$	(-30)60			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-1\text{mA})$, $R_{BE}=\infty$	(-25)50			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_C=(-10\mu\text{A})$, $I_C=0$	(-)15			V

Note:The specifications shown above are for each individual transistor.

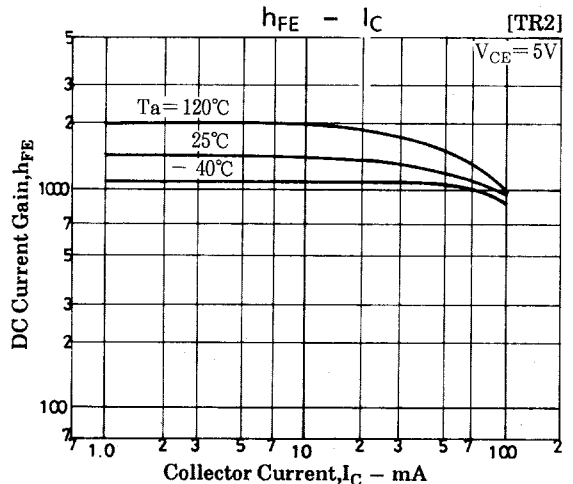
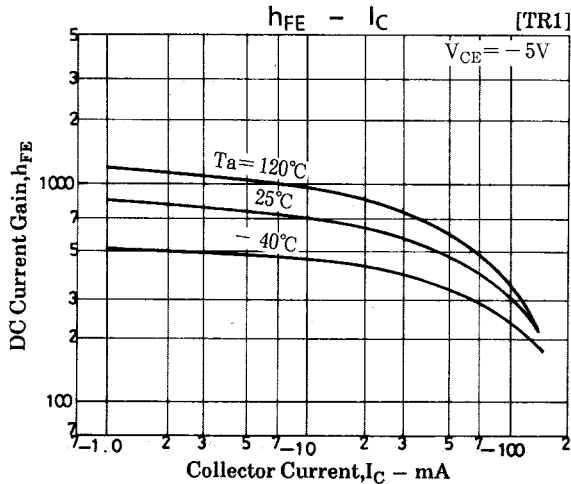
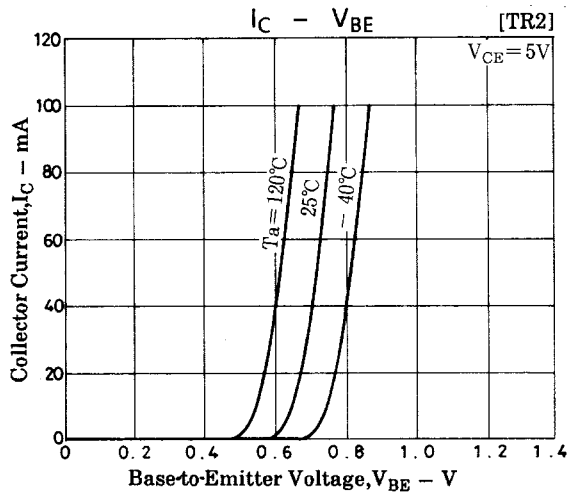
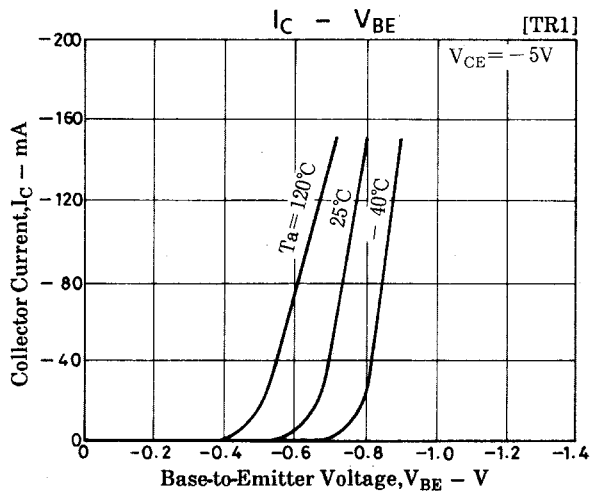
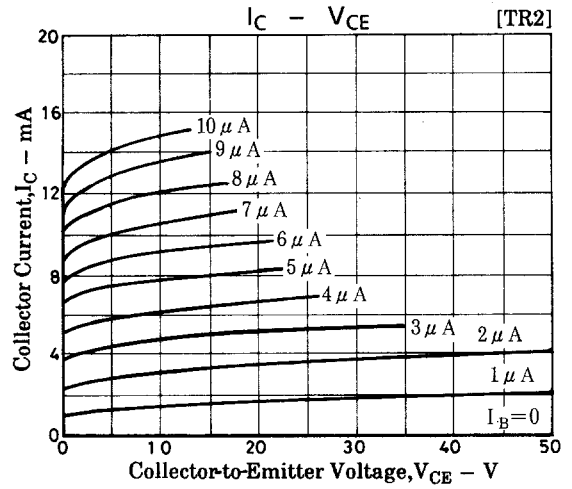
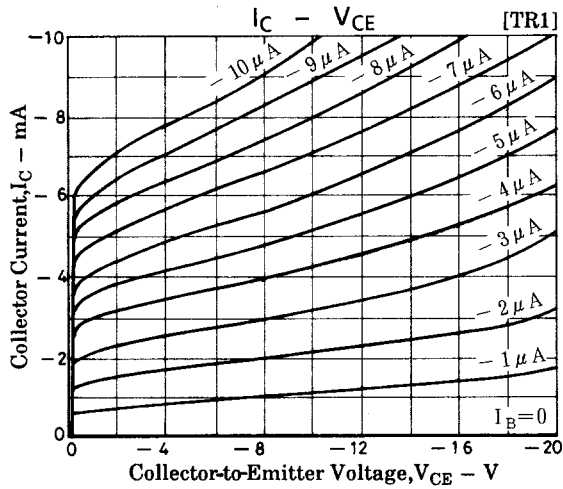
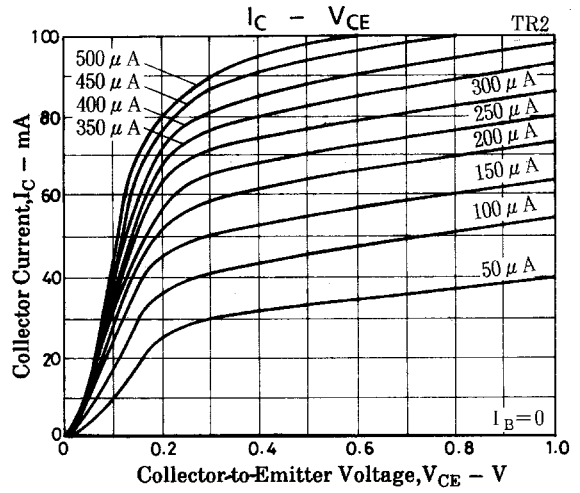
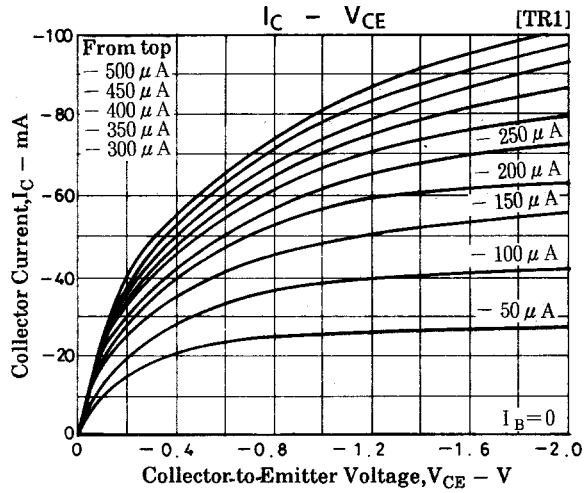
():PNP

Marking:150

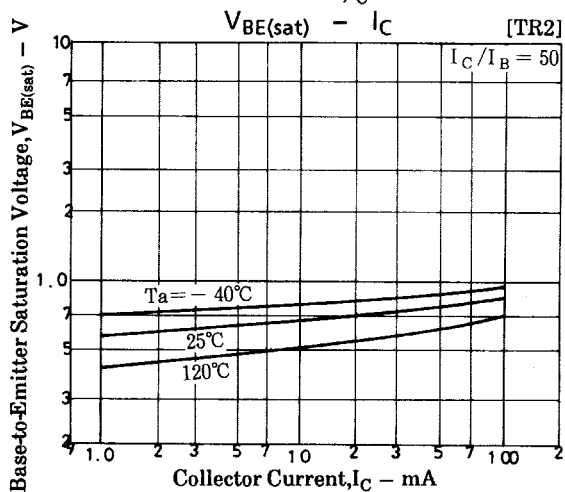
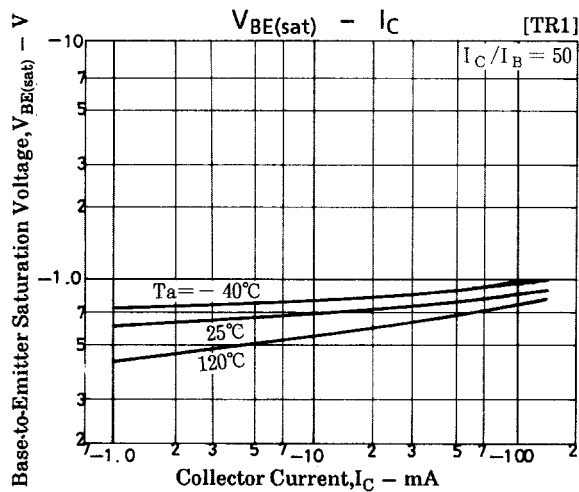
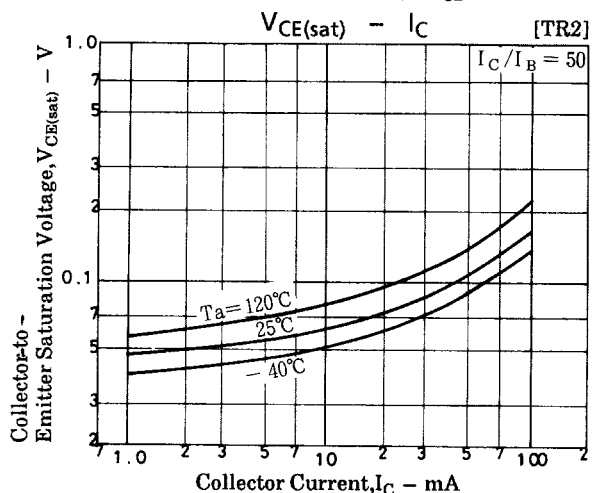
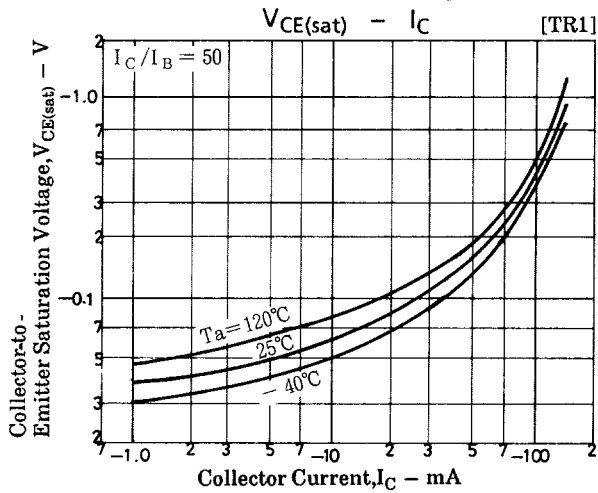
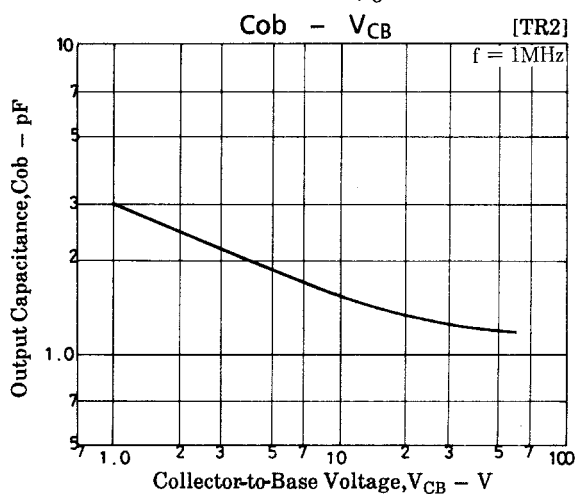
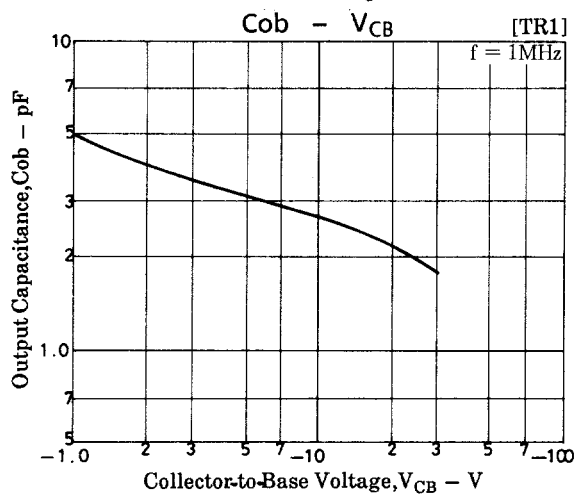
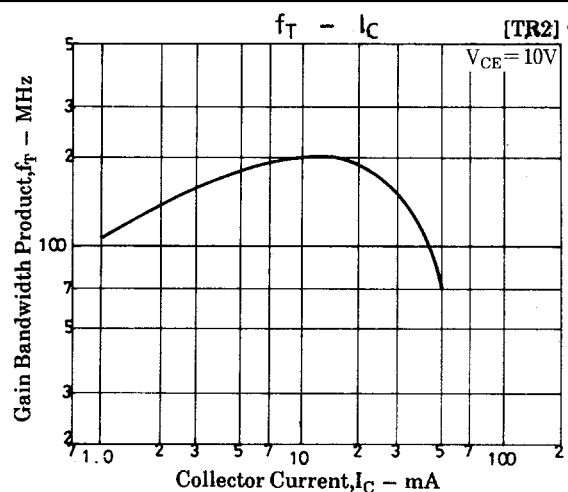
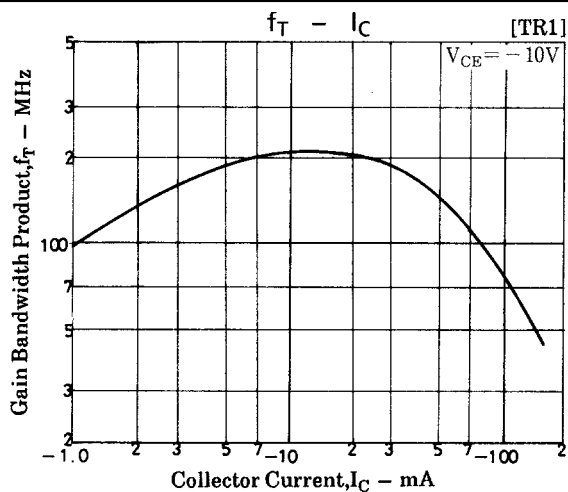
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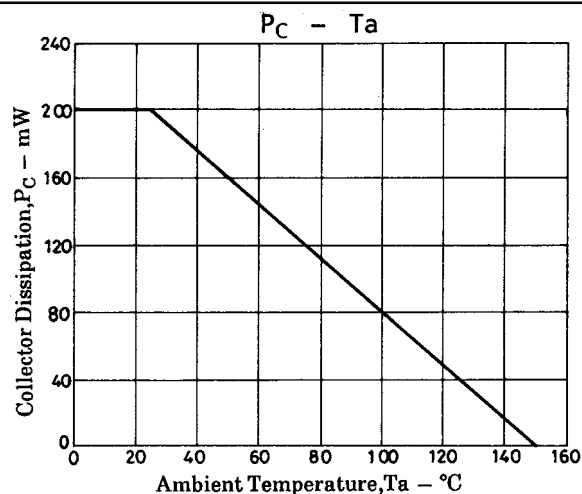
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