



SANYO Semiconductors

DATA SHEET

F5H2101

 PNP Epitaxial Planar Silicon Transistor

High-Current Switching Applications

Applications

- Relay drivers, lamp drivers, motor drivers.

Features

- Adoption of MBIT processes.
- Large current capacitance.
- Low collector-to-emitter saturation voltage.
- High-speed switching.
- The F5H2101 consists of two chips which are equivalent to the 2SA2210 encapsulated in a package.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		-50	V
Collector-to-Emitter Voltage	V _{CEO}		-50	V
Emitter-to-Base Voltage	V _{EBO}		-6	V
Collector Current	I _C		-15	A
		PW=100ms, duty cycle≤1%	-20	A
Collector Current (Pulse)	I _{CP}	PW≤10μs, duty cycle≤10%	-25	A
Base Current	I _B		-3	A
Collector Dissipation	P _C		2	W
		T _C =25°C	30	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

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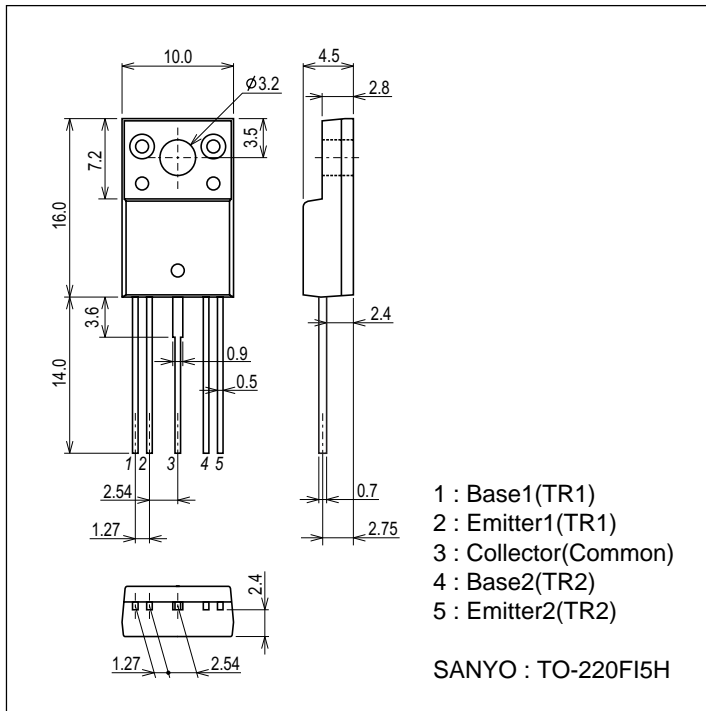
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=-40V, I_E=0A$			-10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-4V, I_C=0A$			-10	μA
DC Current Gain	h_{FE}	$V_{CE}=-2V, I_C=-1A$	150		450	
Gain-Bandwidth Product	f_T	$V_{CE}=-10V, I_C=-1A$		140		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10V, f=1MHz$		215		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-7A, I_B=-350mA$		-200	-500	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-7A, I_B=-350mA$			-1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-100\mu A, I_E=0A$	-50			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1mA, R_{BE}=\infty$	-50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-100\mu A, I_C=0A$	-6			V
Turn-ON Time	t_{on}	See specified Test Circuit.		60		ns
Storage Time	t_{stg}	See specified Test Circuit.		270		ns
Fall Time	t_f	See specified Test Circuit.		20		ns

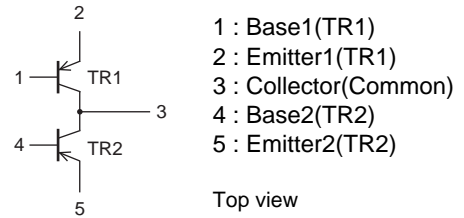
Note : The specifications shown above are for each individual transistor.

Package Dimensions

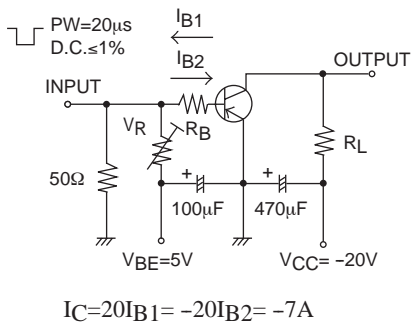
unit : mm (typ)
7526-001



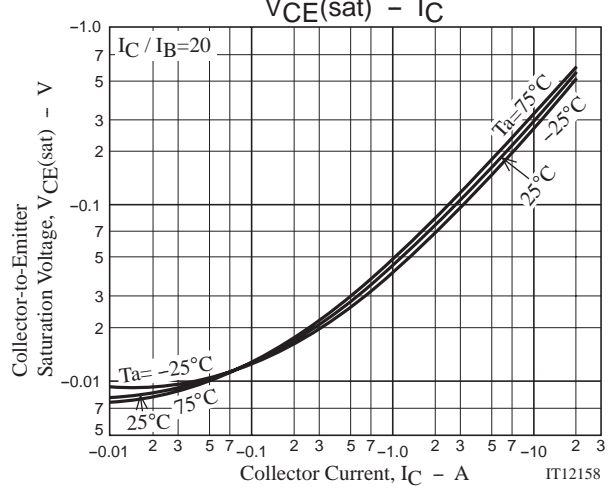
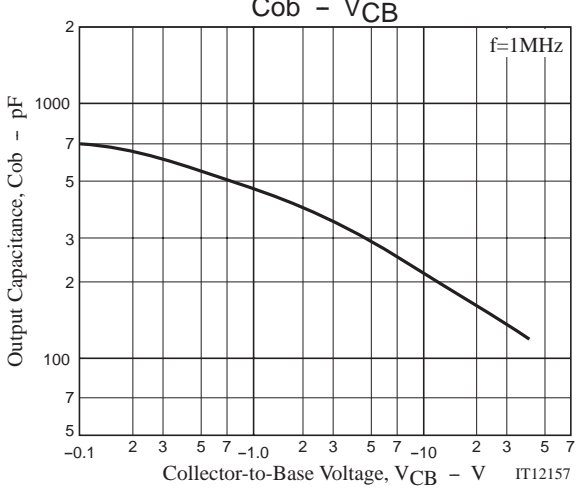
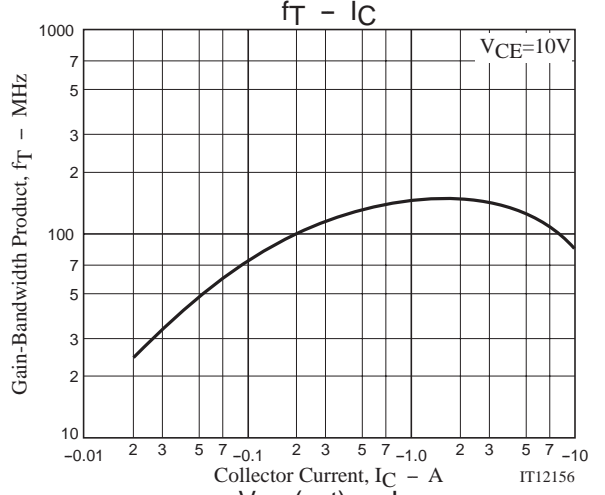
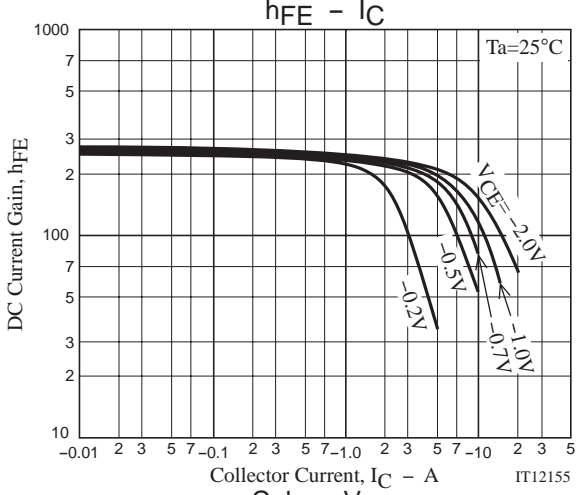
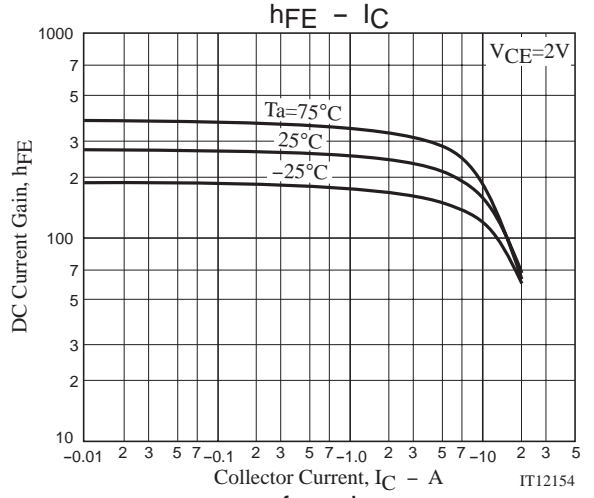
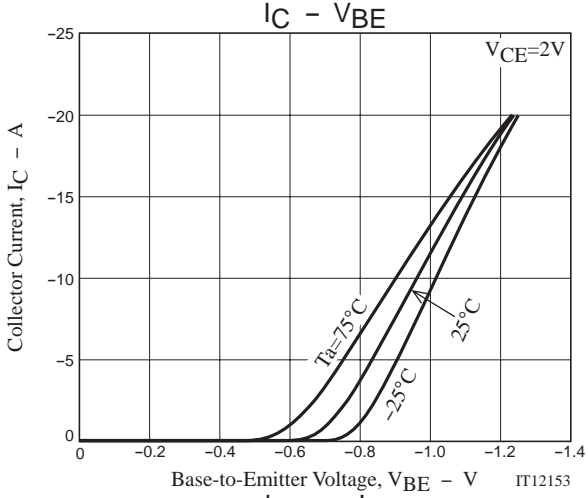
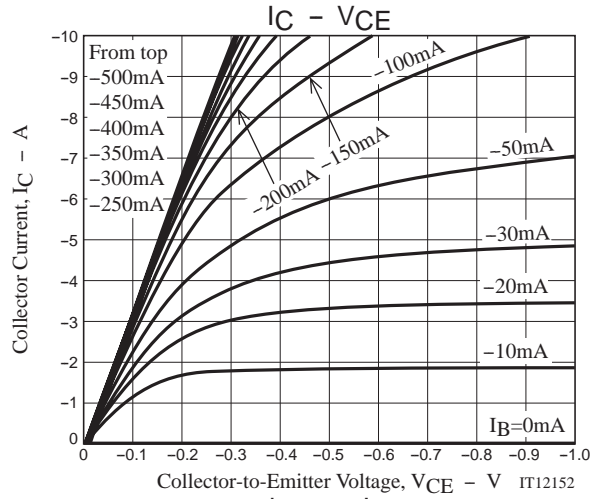
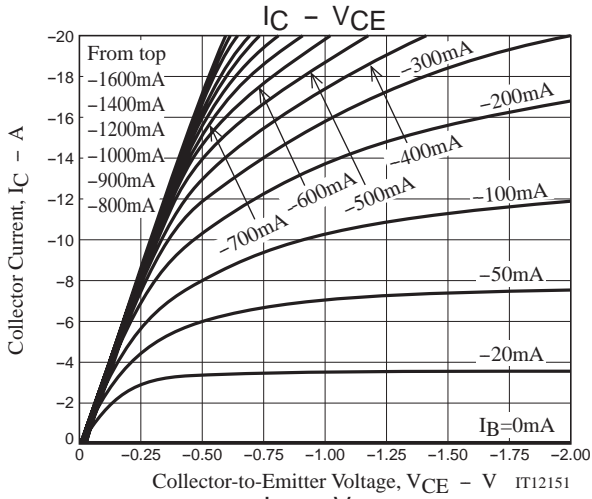
Electrical Connection



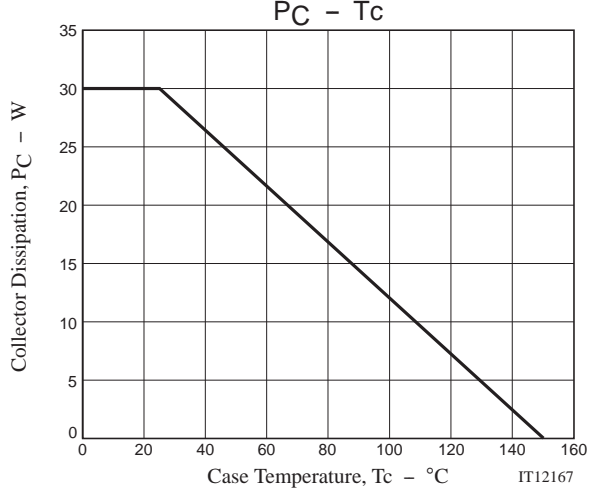
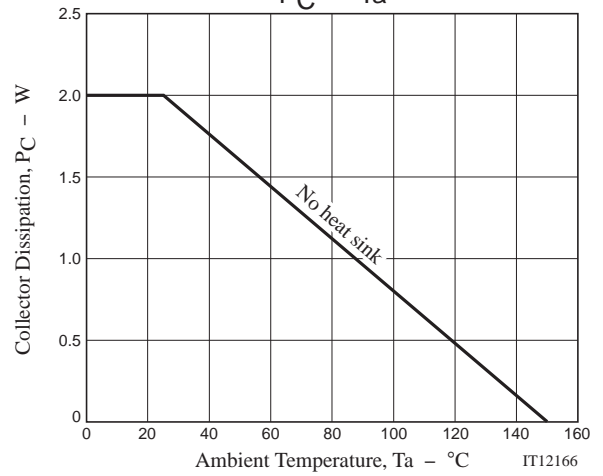
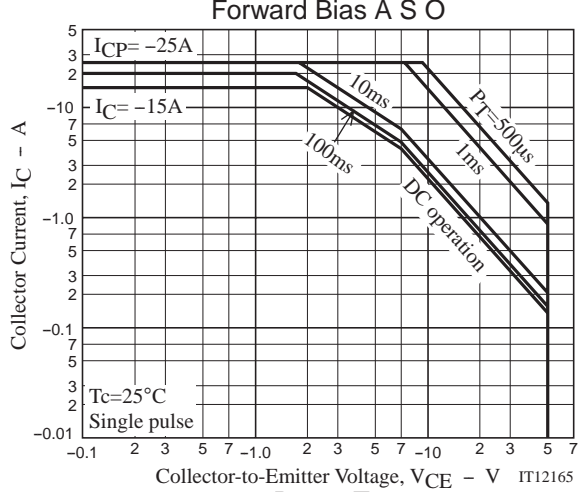
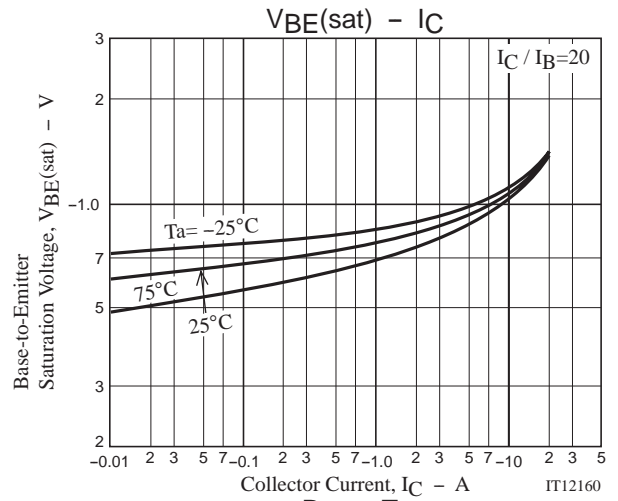
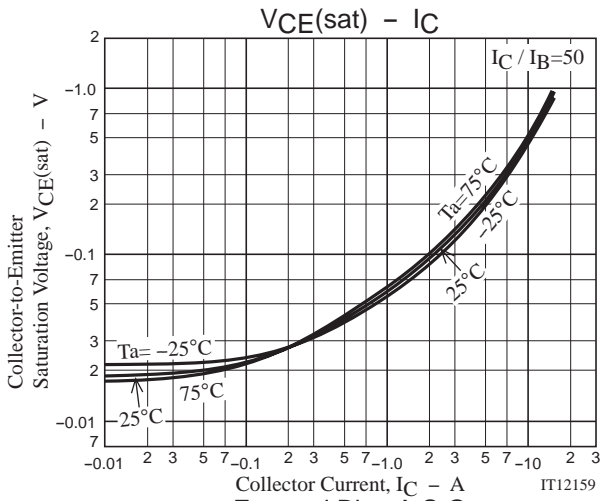
Switching Time Test Circuit



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