



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

2SA2222 — PNP Epitaxial Planar Silicon Transistor

High-Current Switching Applications

Applications

- Relay drivers, lamp drivers, motor drivers.

Features

- Adoption of MBIT process.
- Large current capacitance.
- Low collector-to-emitter saturation voltage.
- High-speed switching.

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		-10	A
Collector Current (Pulse)	I _{CP}		-13	A
Base Current	I _B		-2	A
Collector Dissipation	P _C		2	W
		T _C =25°C	25	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

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2SA2222

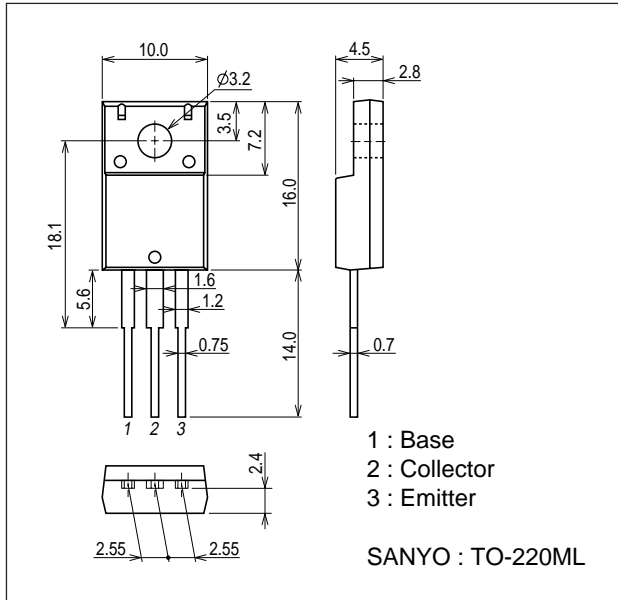
Electrical Characteristics at Ta=25°C

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}	$V_{CE}=-2V, I_C=-270mA$	150		450	
Gain-Bandwidth Product	f_T	$V_{CE}=-10V, I_C=-1A$		230		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10V, f=1MHz$		115		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-6A, I_B=-300mA$		-250	-500	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-6A, I_B=-300mA$			-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.		40		ns
Storage Time	t_{stg}	See specified Test Circuit.		240		ns
Fall Time	t_f	See specified Test Circuit.		22		ns

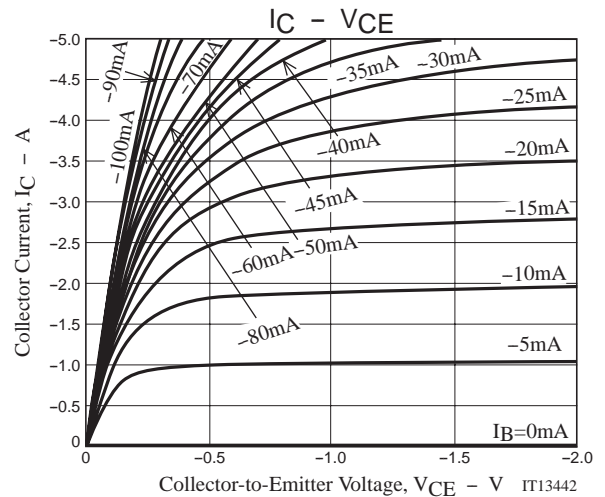
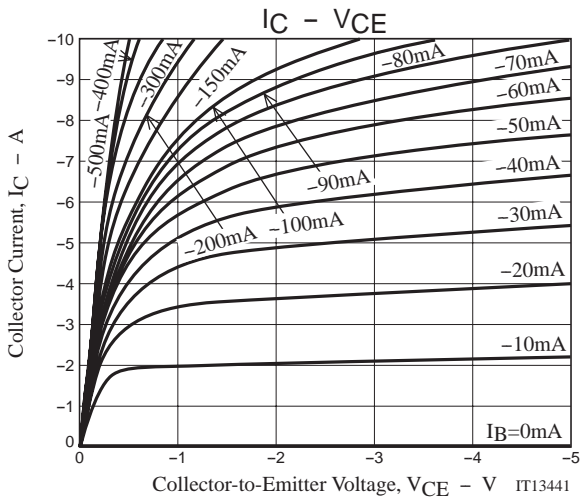
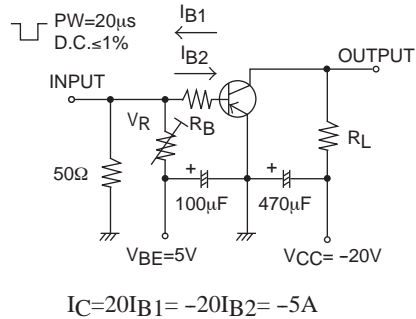
Package Dimensions

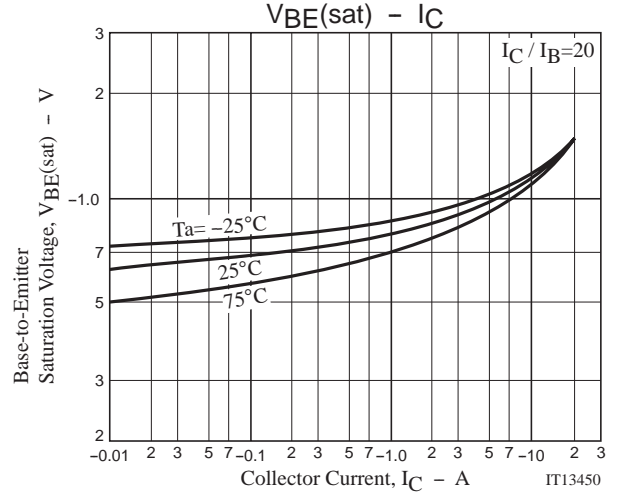
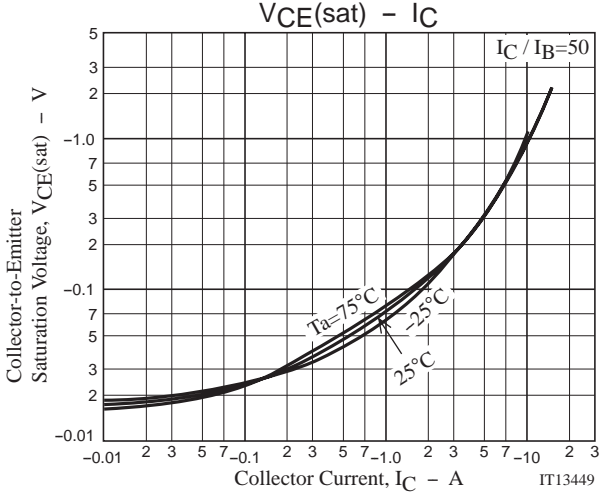
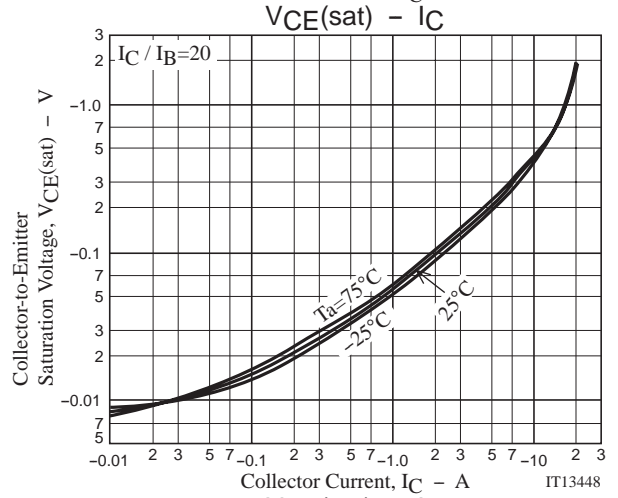
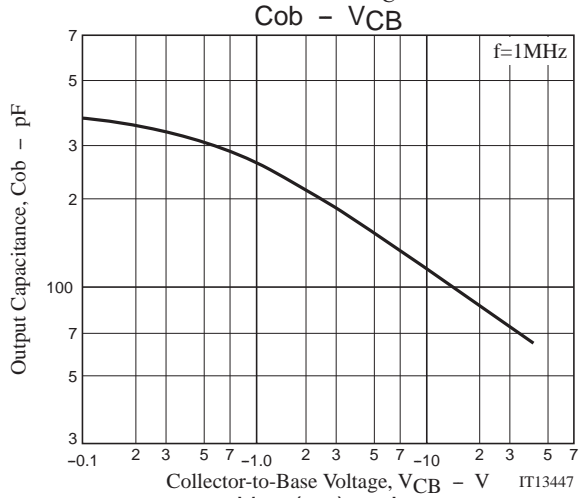
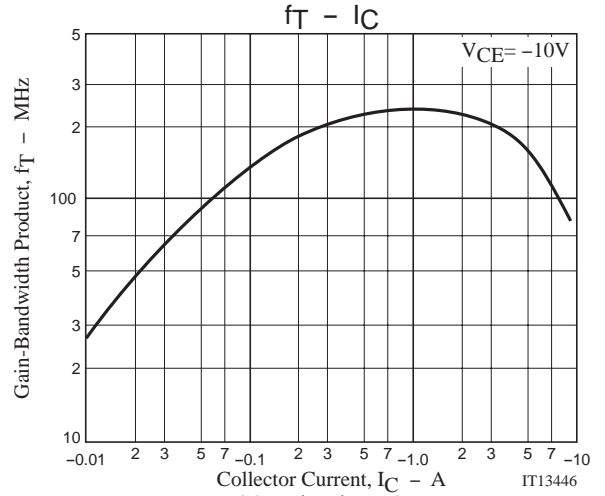
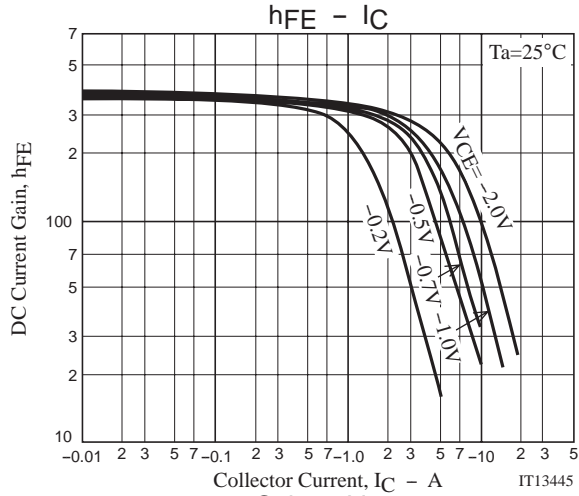
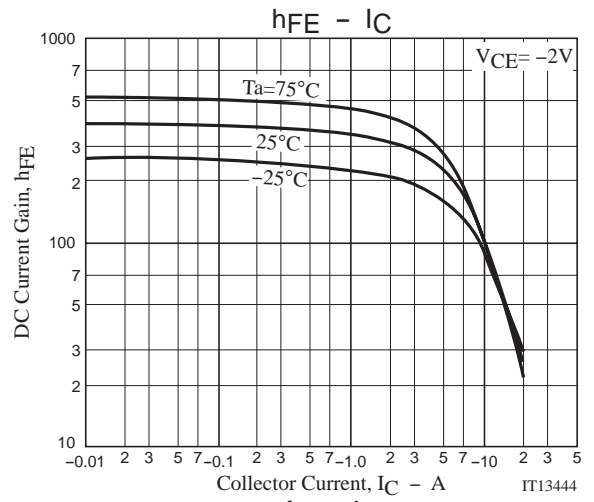
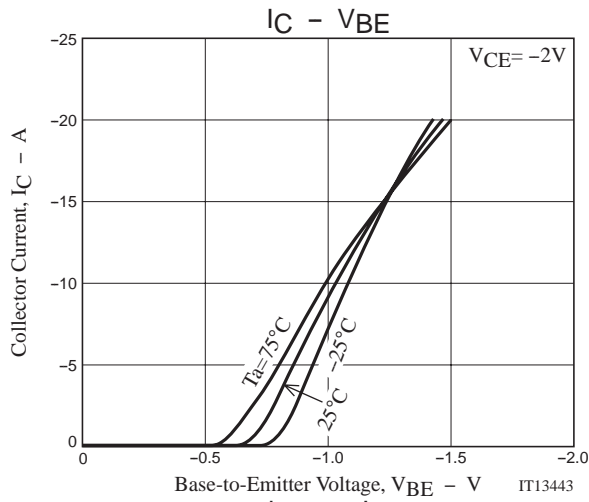
unit : mm (typ)

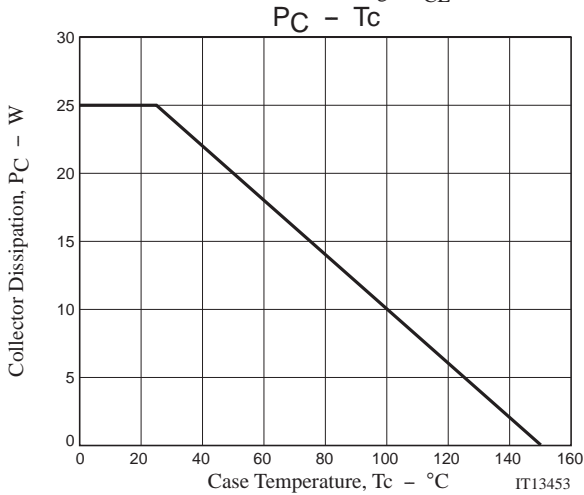
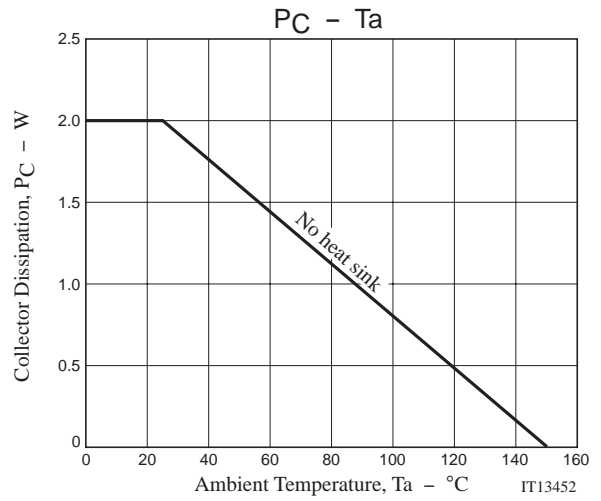
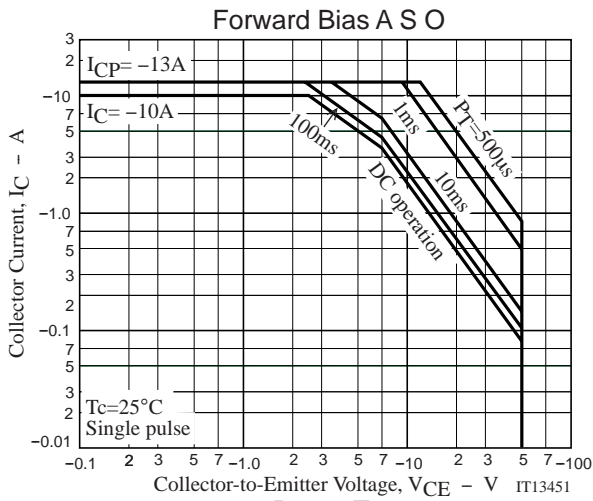
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Switching Time Test Circuit







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