Ordering number : ENA0667

SANYO Semiconductors
DATA SHEET

2SA2210 — 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.

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		–20	A
Collector Current (Pulse)	I_{CP}		–25	A
Base Current	I_B		–3	A
Collector Dissipation	P_C		2	W
		Tc=25°C	30	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		–55 to +150	°C

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SANYO Semiconductor Co., Ltd.
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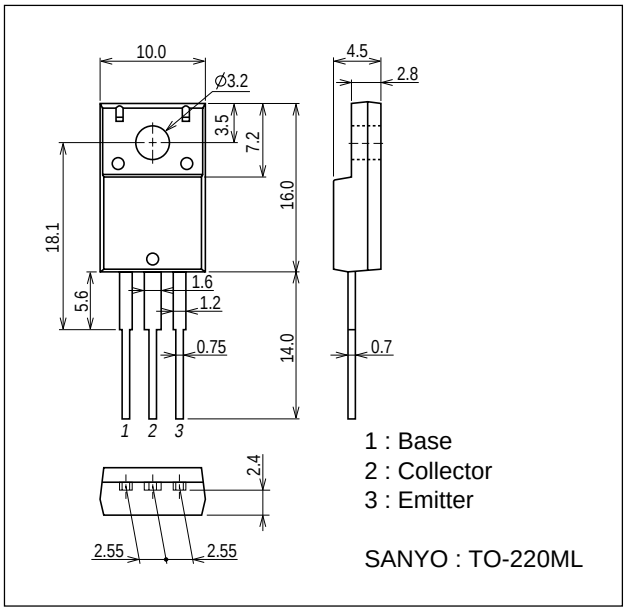
Electrical Characteristics at Ta=25°C

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	Cob	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=–100μA, I_E=0A	–50			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=–1mA, R_{BE}=∞	–50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=–100μA, 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

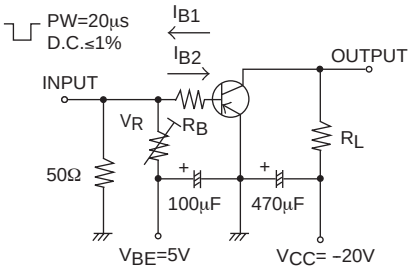
Package Dimensions

unit : mm (typ)

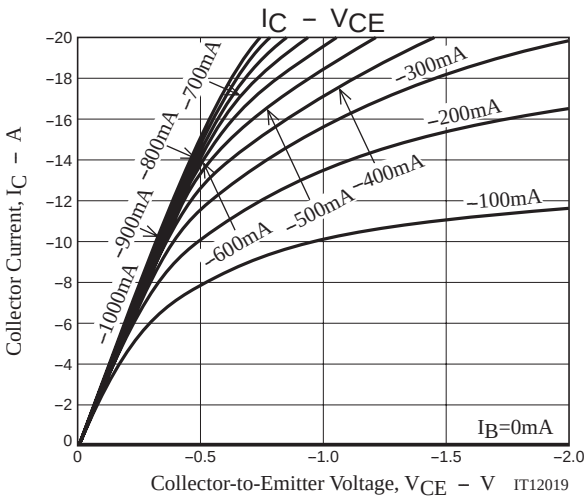
7508-002

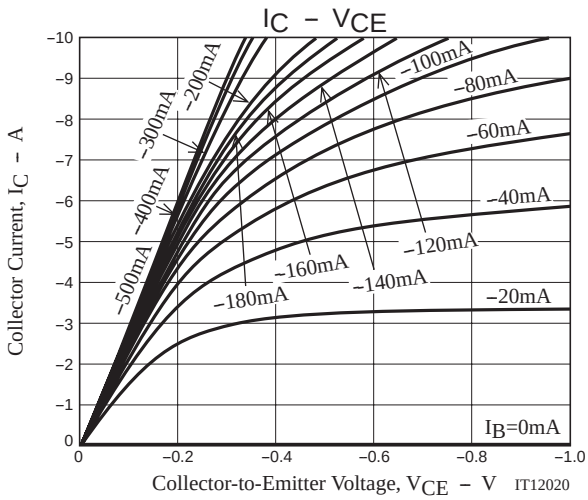


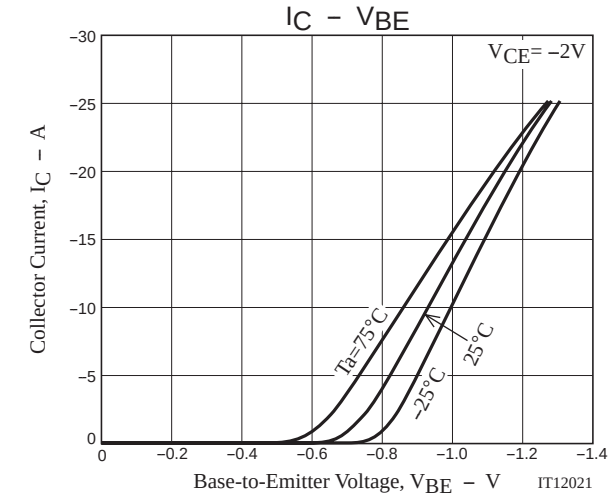
Switching Time Test Circuit

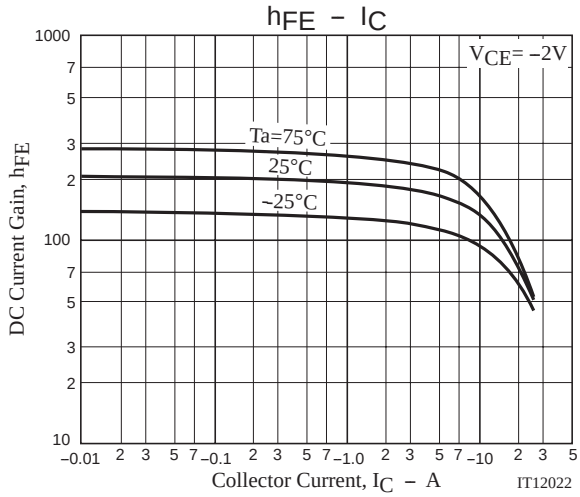


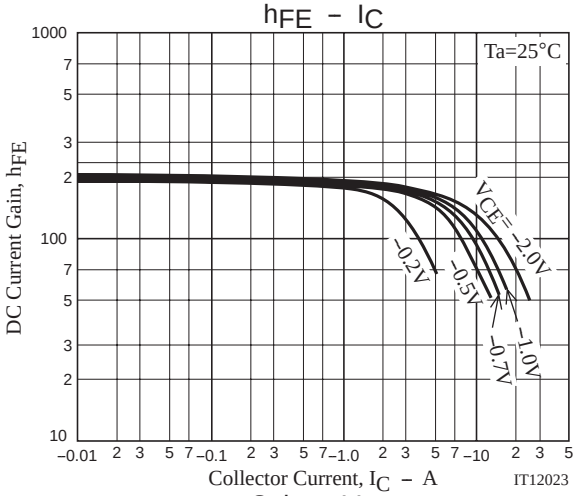
I_C=20I_{B1}= –20I_{B2}= –7A

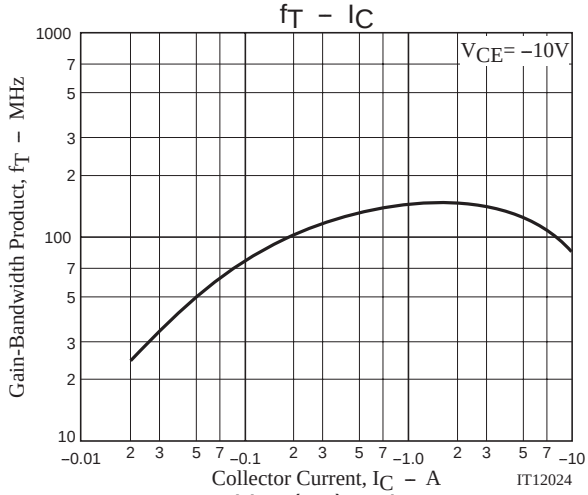


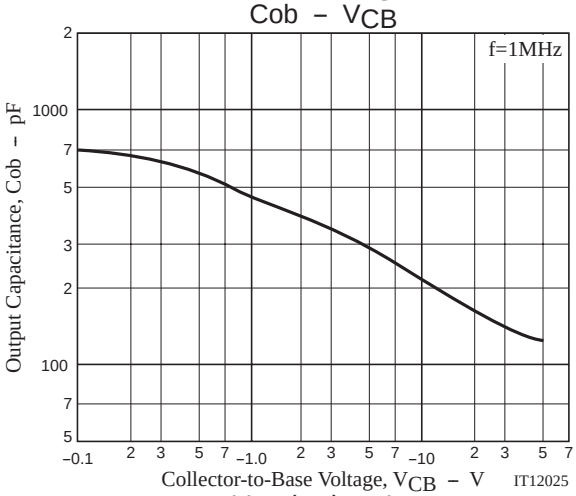


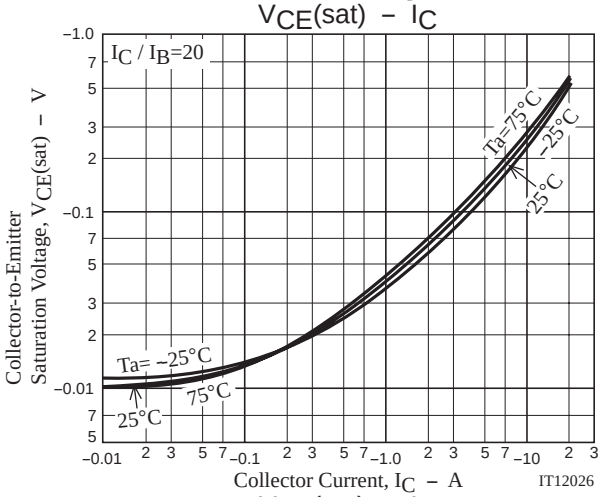

IC – VBE
VCE= –2V
Collector Current, IC – A
Base-to-Emitter Voltage, VBE – V
Ta=75°C
25°C
–25°C
IT12021

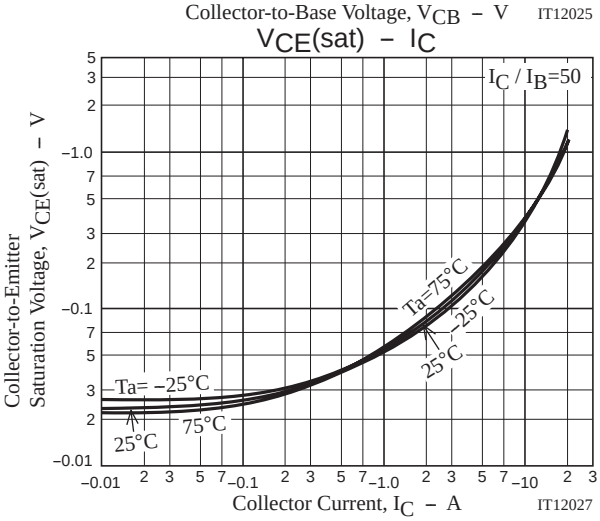

hFE – IC
VCE= –2V
DC Current Gain, hFE
Collector Current, IC – A
Ta=75°C
25°C
–25°C
IT12022

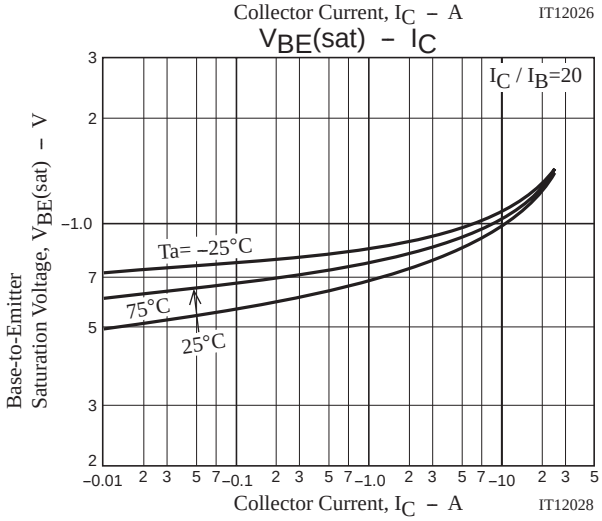

hFE – IC
Ta=25°C
DC Current Gain, hFE
Collector Current, IC – A
VCE= –2.0V
–1.0V
–0.7V
–0.5V
–0.2V
IT12023

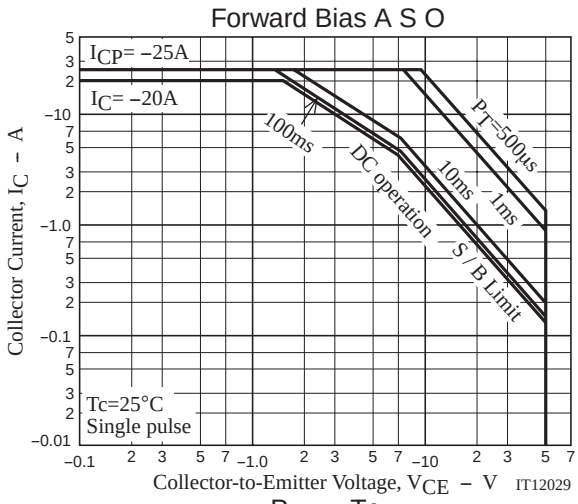

fT – IC
VCE= –10V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – A
IT12024

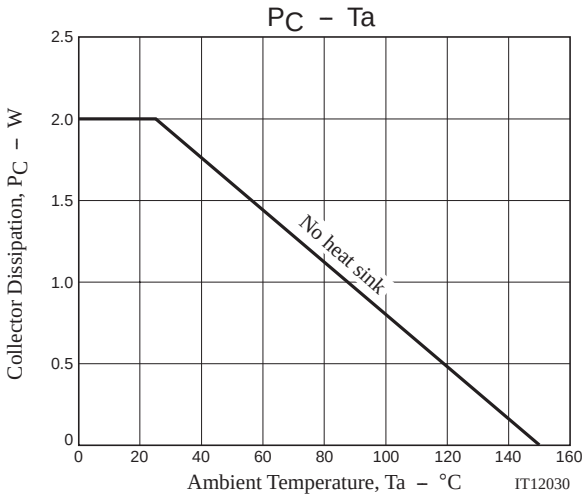

Cob – VCB
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
IT12025

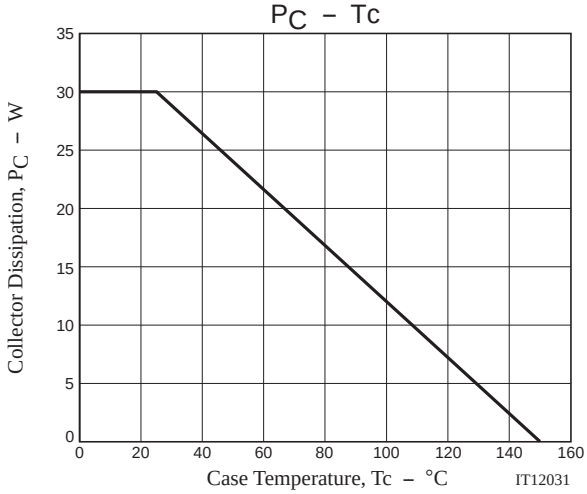

VCE(sat) – IC
IC / IB=20
Collector-to-Emitter
Saturation Voltage, VCE(sat) – V
Collector Current, IC – A
Ta=75°C
–25°C
25°C
Ta= –25°C
75°C
25°C
IT12026


VCE(sat) – IC
IC / IB=50
Collector-to-Emitter
Saturation Voltage, VCE(sat) – V
Collector Current, IC – A
Ta=75°C
–25°C
25°C
Ta= –25°C
75°C
25°C
IT12027


VBE(sat) – IC
IC / IB=20
Base-to-Emitter
Saturation Voltage, VBE(sat) – V
Collector Current, IC – A
Ta= –25°C
75°C
25°C
IT12028







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