



SANYO Semiconductors

DATA SHEET

2SA2031 / 2SC5669

PNP Epitaxial Planar Silicon Transistor
 NPN Triple Diffused Planar Silicon Transistor
230V / 15A, AF100W

Output Applications

Features

- Large current capacitance.
- Wide ASO and high durability against breakdown.
- Adoption of MBIT process.

Specifications Note*() : 2SA2031

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		(-)250	V
Collector-to-Emitter Voltage	V _{CEO}		(-)230	V
Emitter-to-Base Voltage	V _{EBO}		(-)6	V
Collector Current	I _C		(-)15	A
Collector Current (Pulse)	I _{CP}		(-)30	A
Collector Dissipation	P _C		2.5	W
		T _C =25°C	140	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CB0}	V _{CB} =(-)250V, I _E =0			(-)0.1	mA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0			(-)0.1	mA
DC Current Gain	h _{FE} (1)	V _{CE} =(-)5V, I _C =(-)1A	60		160	
	h _{FE} (2)	V _{CE} =(-)5V, I _C =(-)7.5A	35			
Gain-Bandwidth Product	f _T	V _{CE} =(-)5V, I _C =(-)1A			(10)15	MHz
Output Capacitance	C _{ob}	V _{CB} =(-)10V, f=1MHz		(400)200		pF
Base-to-Emitter Voltage	V _{BE}	V _{CE} =(-)5V, I _C =(-)7.5A			1.5	V
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =(-)7.5A, I _B =(-)0.75A		(-0.3)0.2	(-)2.0	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =(-)5mA, I _E =0	(-)250			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =(-)50mA, R _{BE} =∞	(-)230			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =(-)5mA, I _C =0	(-)6			V
Turn-On Time	t _{on}	See specified test circuit.		(0.45)0.56		μs
Storage Time	t _{stg}	See specified test circuit.		(1.75)3.3		μs
Fall Time	t _f	See specified test circuit.		(0.25)0.4		μs

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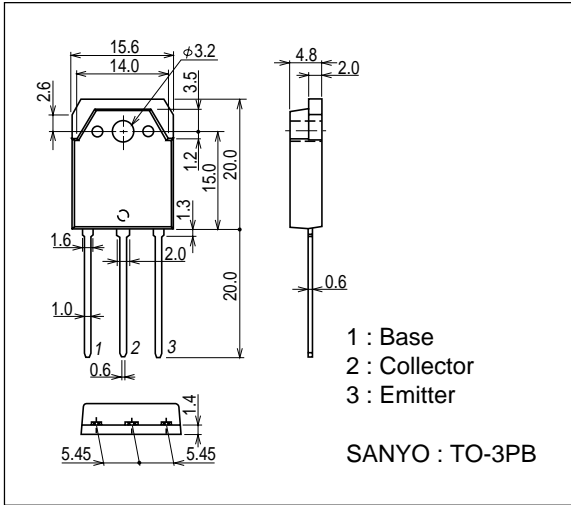
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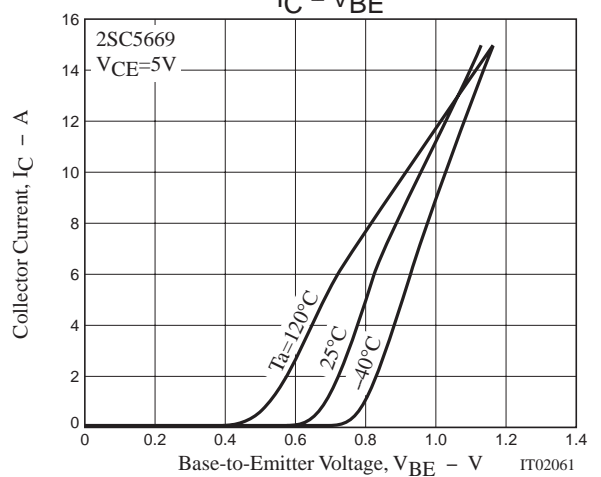
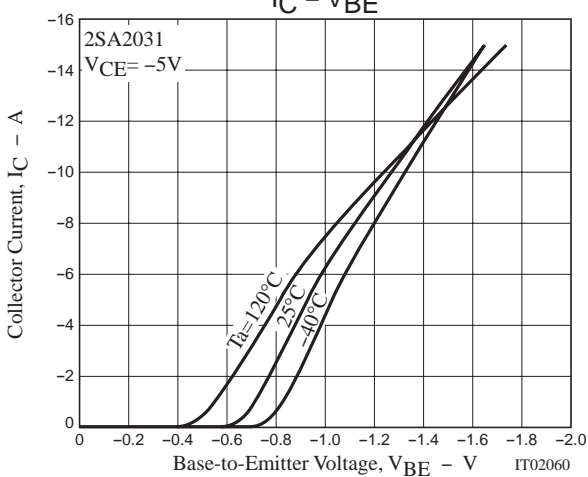
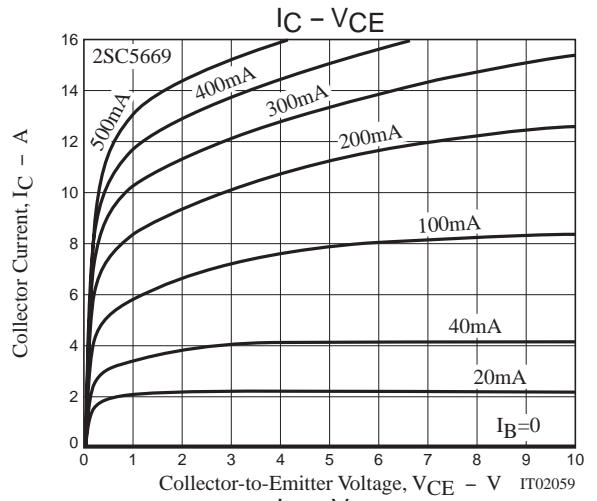
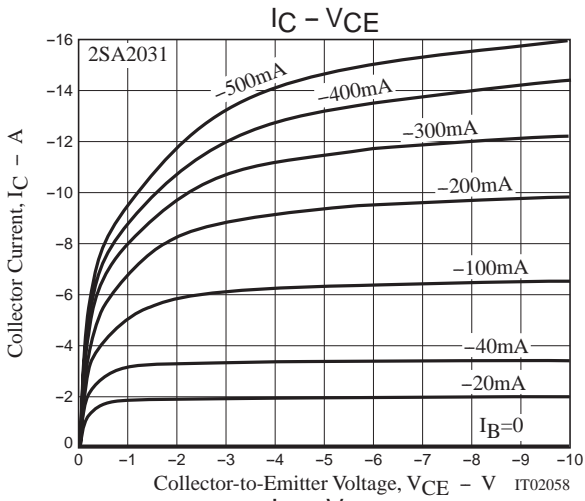
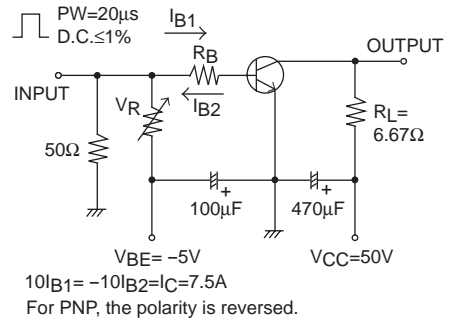
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Package Dimensions

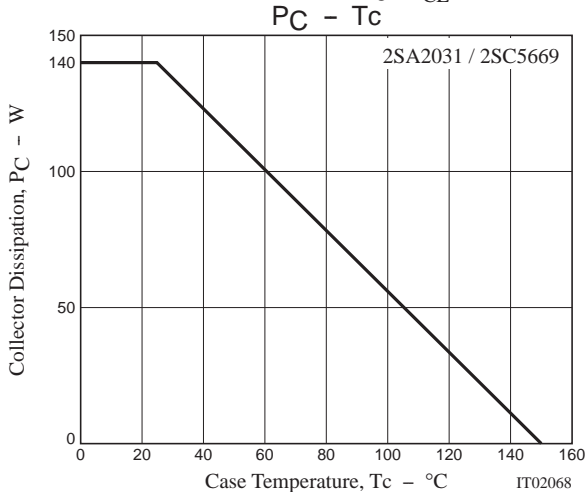
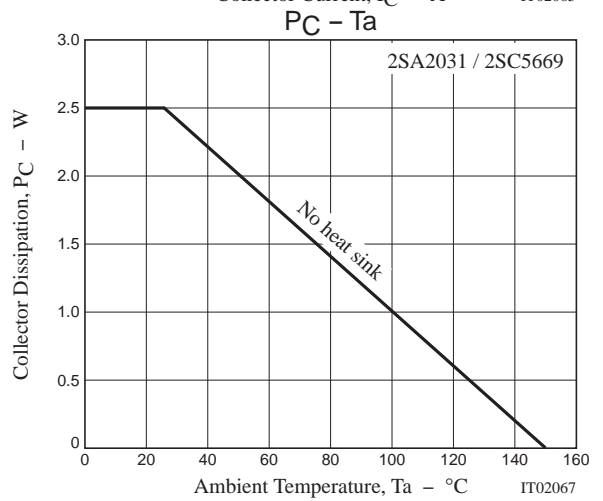
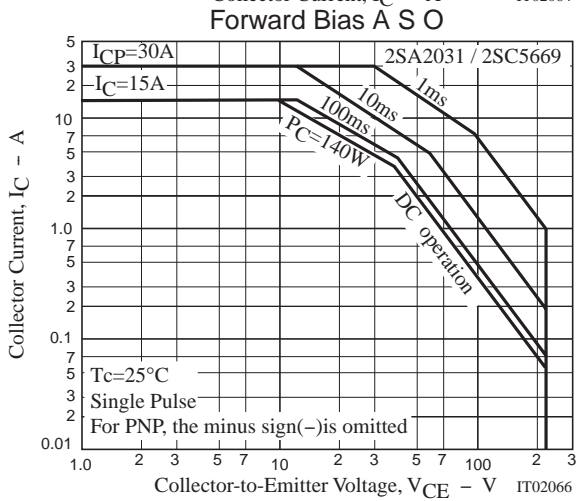
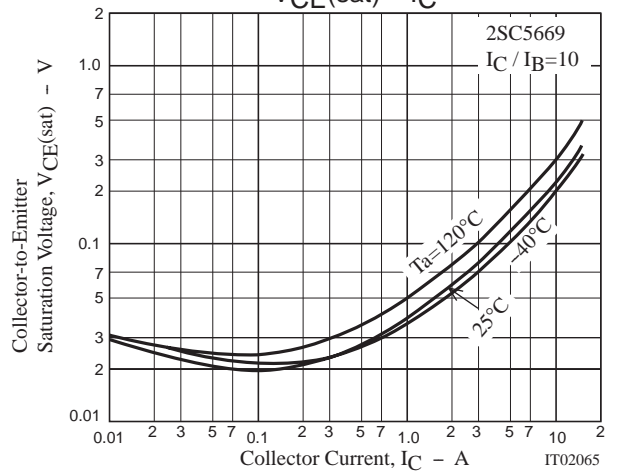
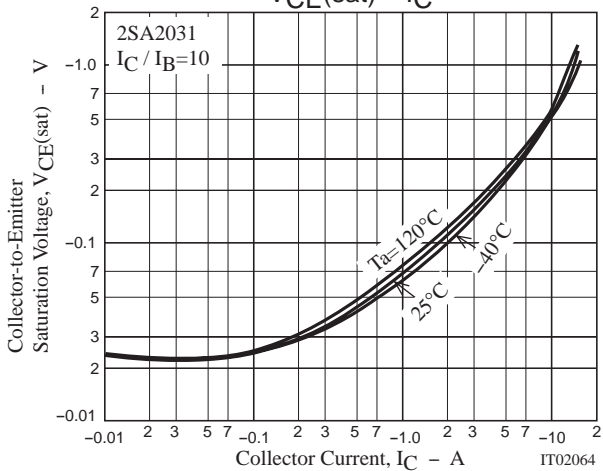
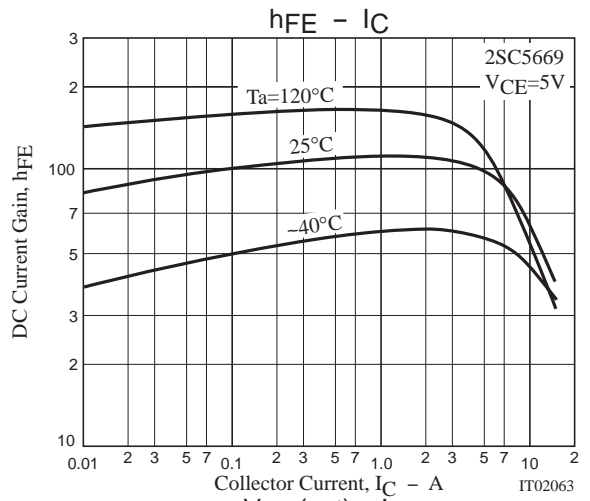
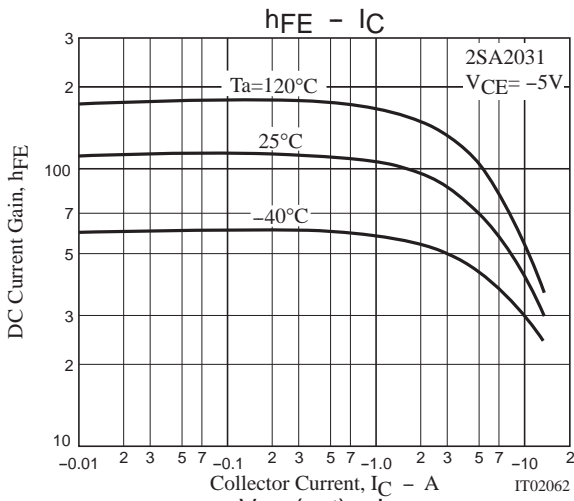
unit : mm
2022A



Switching Time Test Circuit



2SA2031 / 2SC5669



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