



SANYO Semiconductors

DATA SHEET

2SD1841

 — NPN Triple Diffused Planar Silicon Transistor
100V / 25A Switching Applications

Applications

- Motor drivers, relay drivers, converters and other general high-current switching applications.

Features

- Large current capacity and wide ASO.
- Low saturation voltage.

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		110	V
Collector-to-Emitter Voltage	VCEO		100	V
Emitter-to-Base Voltage	VEBO		6	V
Collector Current	IC		25	A
Collector Current (Pulse)	ICP		40	A
Base Current	IB		8	A
Collector Dissipation	PC		3.0	W
		$T_c=25^\circ\text{C}$	120	W
Junction Temperature	Tj		150	$^\circ\text{C}$
Storage Temperature	Tstg		-55 to +150	$^\circ\text{C}$

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2SD1841

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=100V, I_E=0A$			0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5V, I_C=0A$			0.1	mA
DC Current Gain	h_{FE1}	$V_{CE}=2V, I_C=2.5A$	50*		140*	
	h_{FE2}	$V_{CE}=2V, I_C=10A$	20			
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10A, I_B=1A$			0.8	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=10A, I_B=1A$			1.5	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0A$	110			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5mA, R_{BE}=\infty$	100			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0A$	6			V

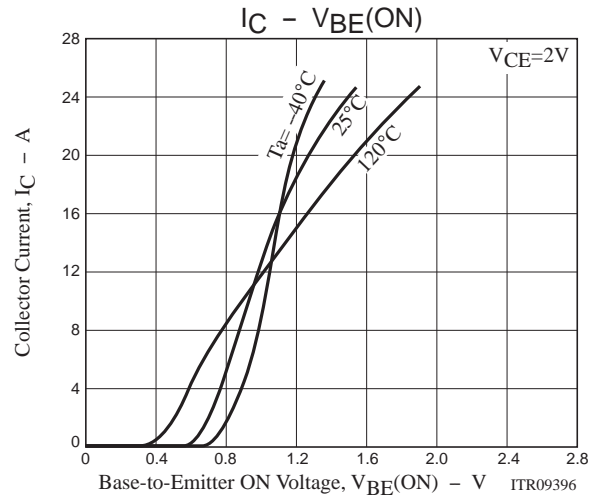
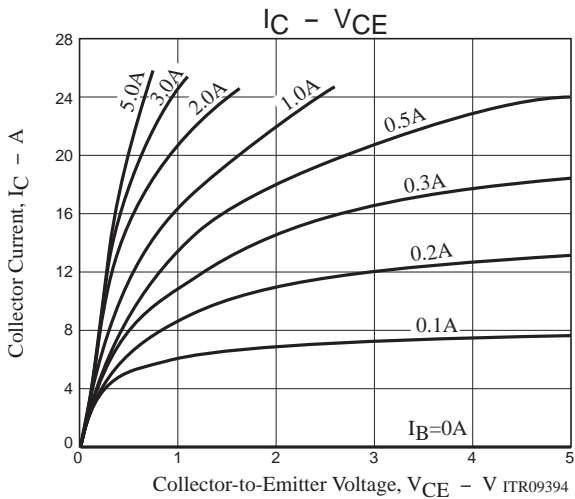
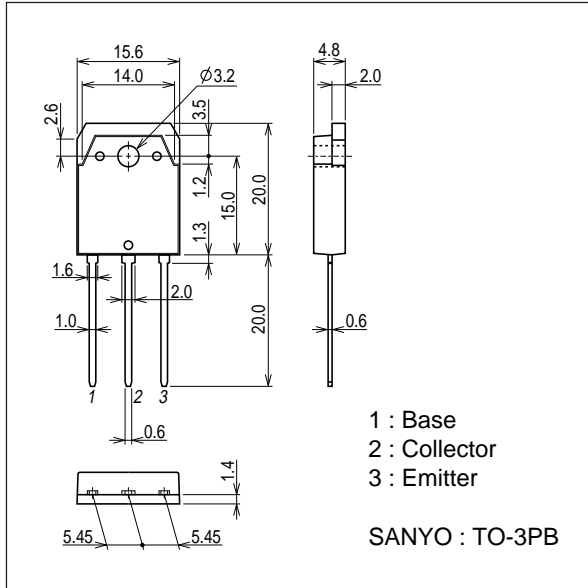
* : The 2SD1841 is classified by 2.5A h_{FE} as follows :

Rank	P	Q
h_{FE}	50 to 100	70 to 140

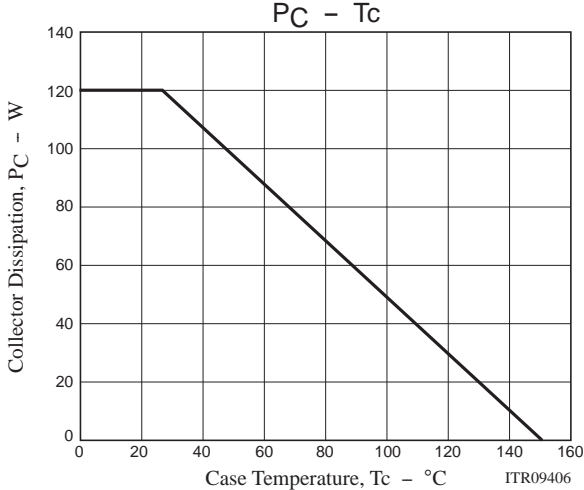
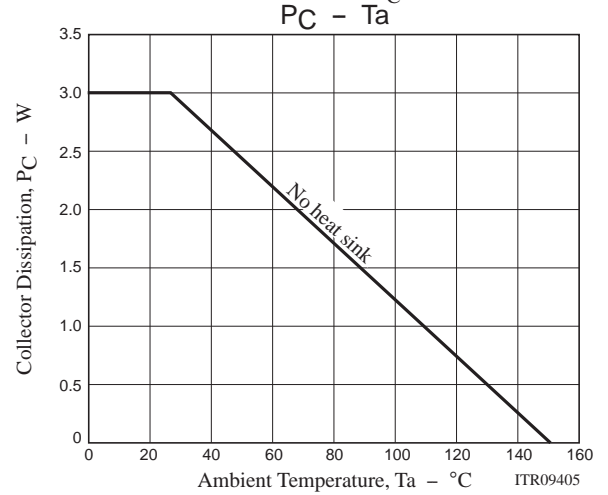
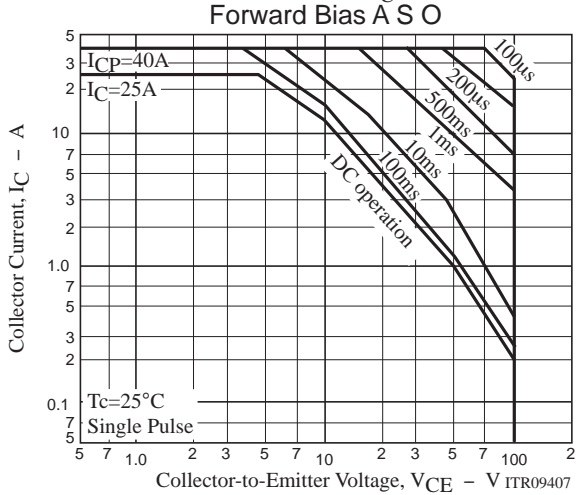
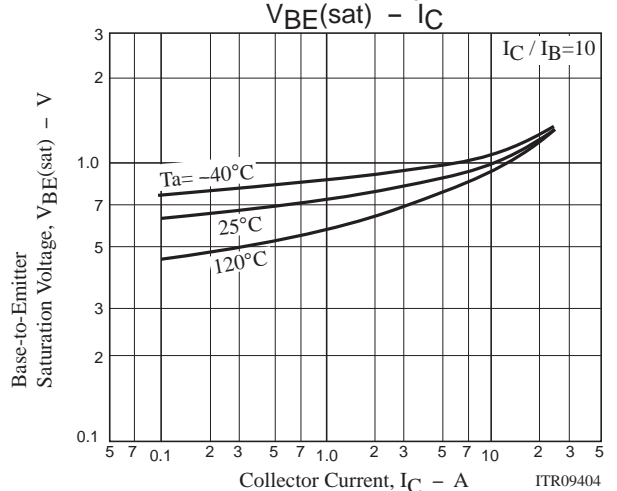
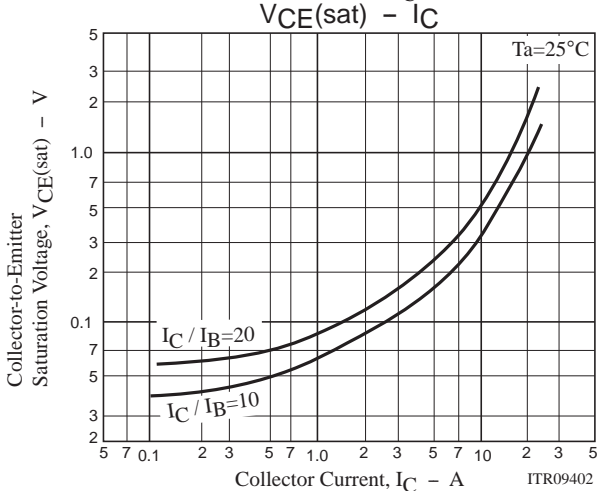
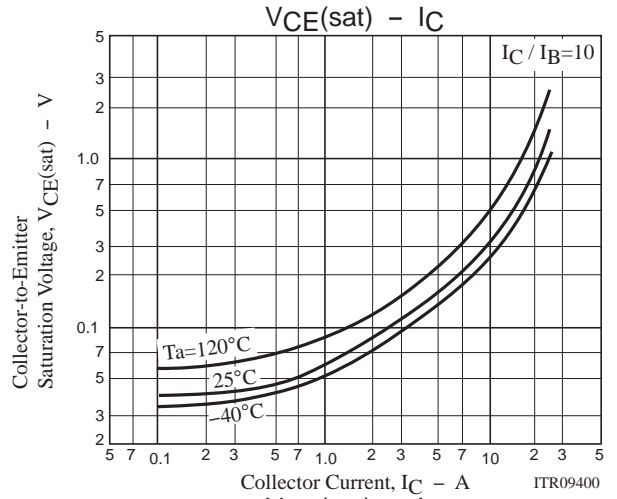
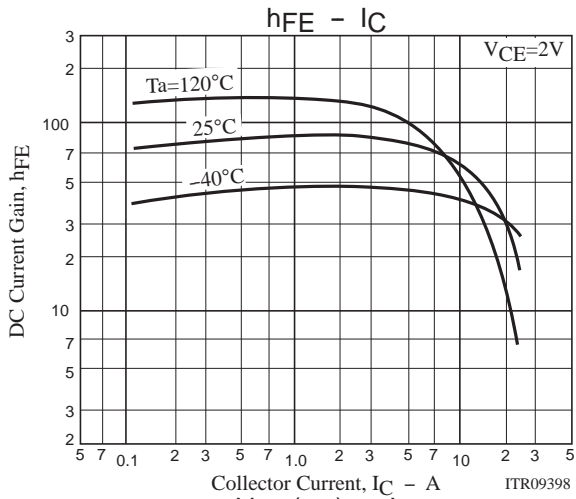
Package Dimensions

unit : mm (typ)

7503-003



2SD1841



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