Ordering number : ENN7287

NPN Epitaxial Planar Silicon Transistor

2SC5832

Driver Applications

Applications

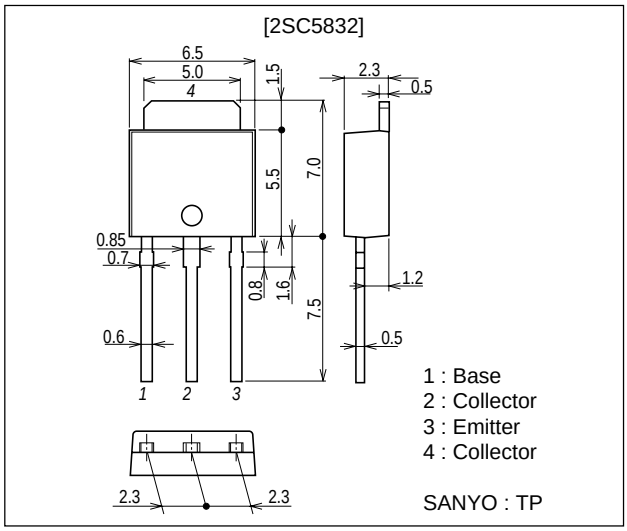
- Suitable for use in switching of inductive load (motor drivers, printer hammer drivers, relay drivers).

Features

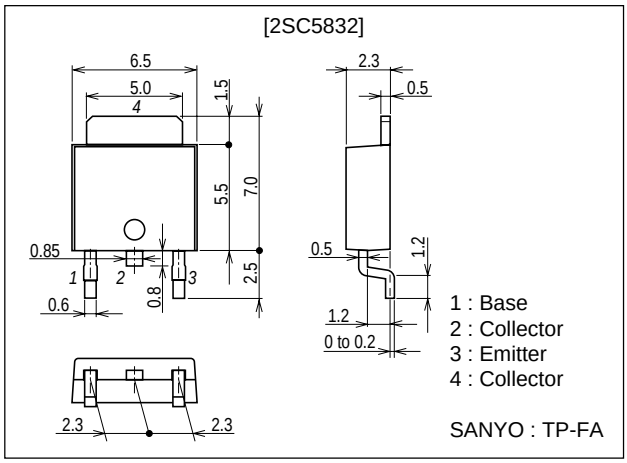
- High DC current gain.
- Wide ASO.
- On-chip zener diode of 65±10V between collector and base.
- Uniformity in collector-to-base voltage.
- Large inductive load handling capability.

Package Dimensions

unit : mm
2045B



unit : mm
2044B



Specifications

Absolute Maximum Ratings at Ta=25°C

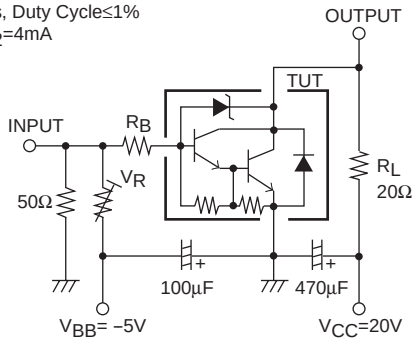
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}	On-chip zener diode(65±10V)	55	V
Collector-to-Emitter Voltage	V_{CEO}	On-chip zener diode(65±10V)	55	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		2	A
Collector Current (Pulse)	I_{CP}		4	A
Collector Dissipation	P_C		1.0	W
		Tc=25°C	10	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=40V, I_E=0			10	µA
Emitter Cutoff Current	I_{EBO}	V_{EB}=5V, I_C=0			2	mA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=1A	1000	4000		
Gain-Bandwidth Product	f_T	V_{CE}=5V, I_C=1A		180		MHz
Inductive Load	Es / b	L=100mH, R_{BE}=100Ω	25			mJ
Collector-to-Emitter Saturation Voltage	V_{CE}(sat)	I_C=1A, I_B=4mA		1.0	1.5	V
Base-to-Emitter Saturation Voltage	V_{BE}(sat)	I_C=1A, I_B=4mA			2.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=100µA, I_E=0	55	65	75	V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	55	65	75	V
Turn-ON Time	t_{on}	See specified Test Circuit.		0.2		µs
Storage Time	t_{stg}	See specified Test Circuit.		3.5		µs
Fall Time	t_f	See specified Test Circuit.		0.5		µs

Switching Time Test Circuit

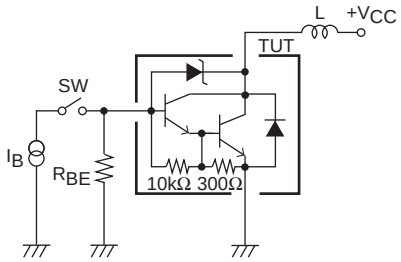
PW=50µs, Duty Cycle≤1%
I_{B1}= −I_{B2}=4mA

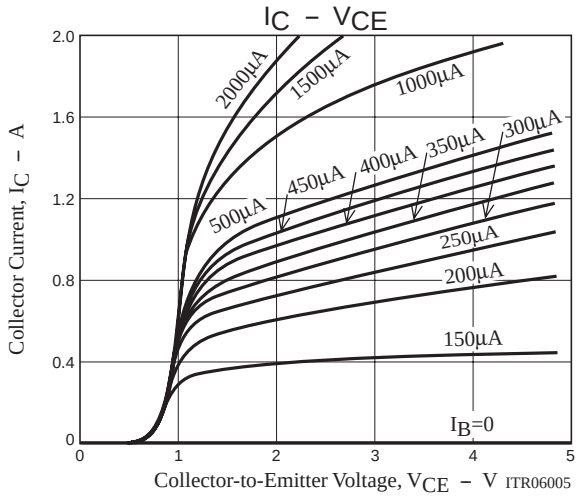


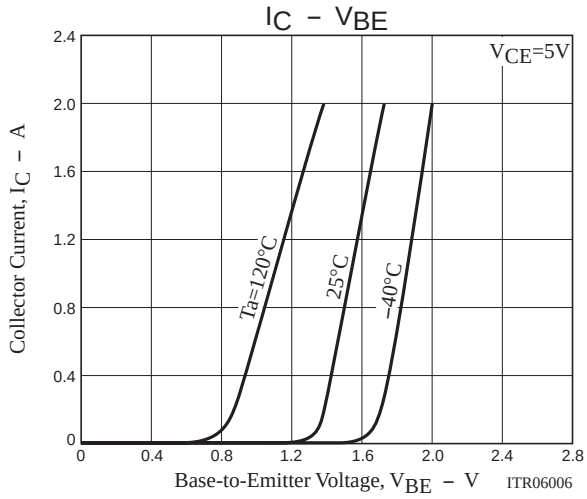
I_C=250A, I_{B1}= −250A, I_{B2}=1A

Es / b Test Circuit

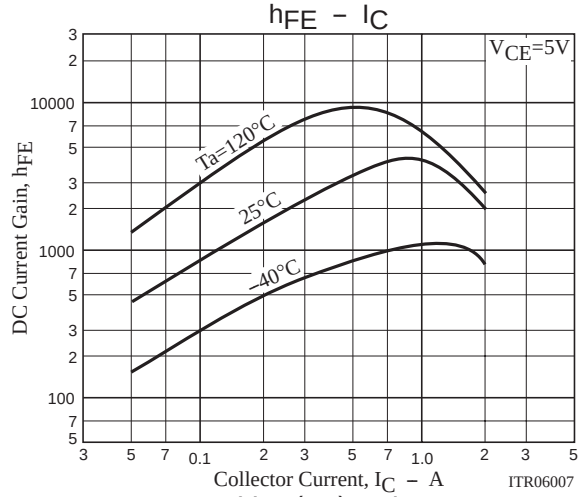
V_{CC}=20V, R_{BE}=100Ω



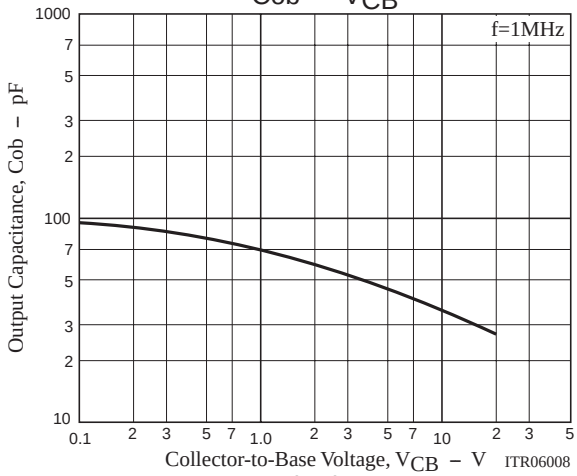




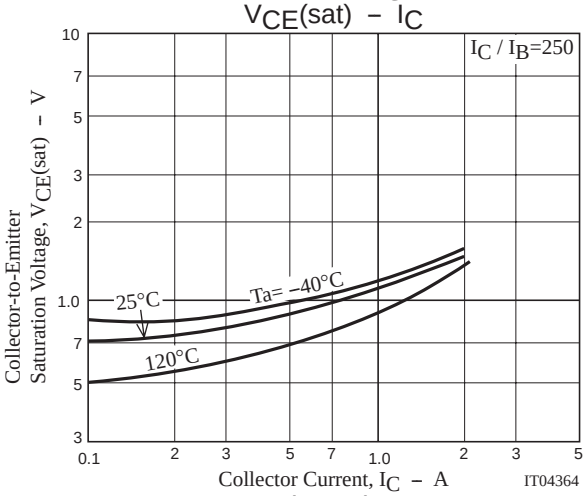
h_{FE} – I_C



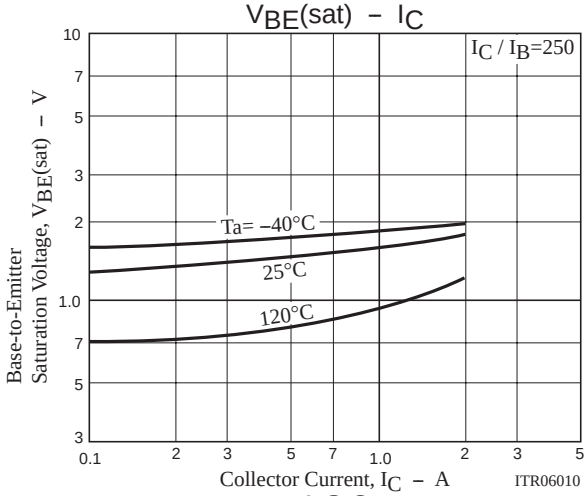
Cob – V_{CB}



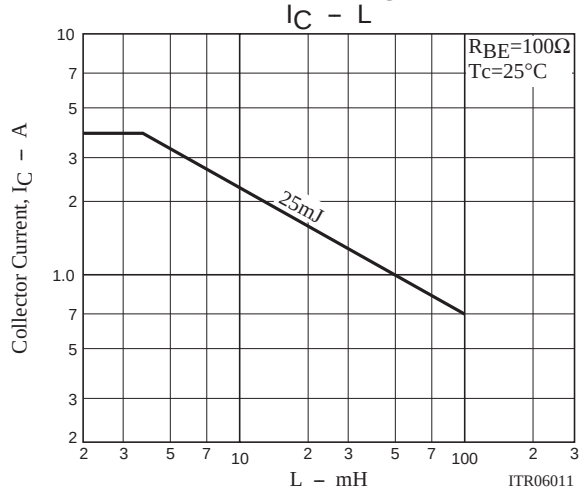
V_{CE}(sat) – I_C



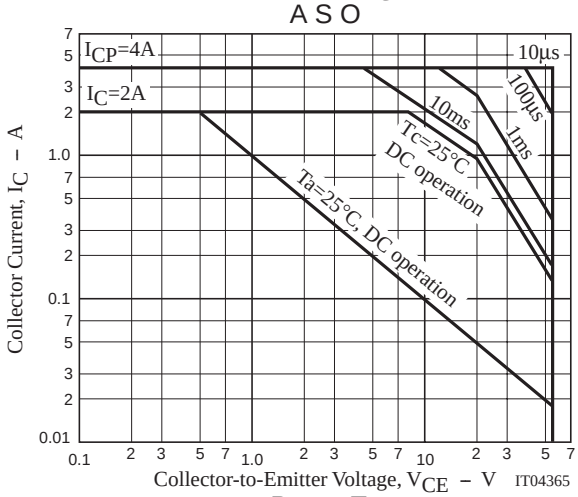
V_{BE}(sat) – I_C



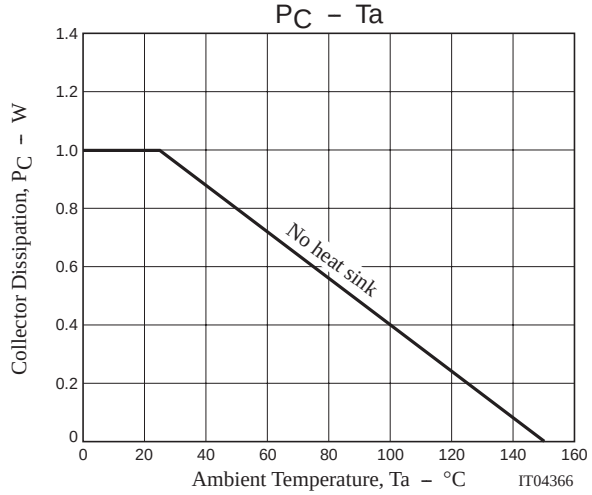
I_C – L



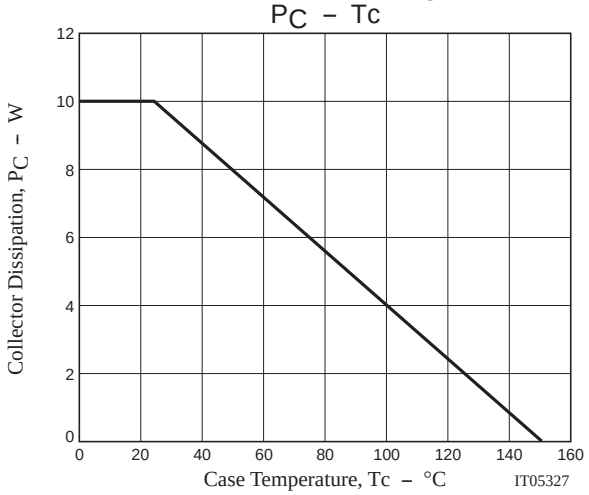
A S O



P_C – Ta



P_C – Tc



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