



2SB1700 / 2SD2663

Driver Applications

Applications

- Motor drivers, printer hammer drivers, relay drivers, voltage regulator control.

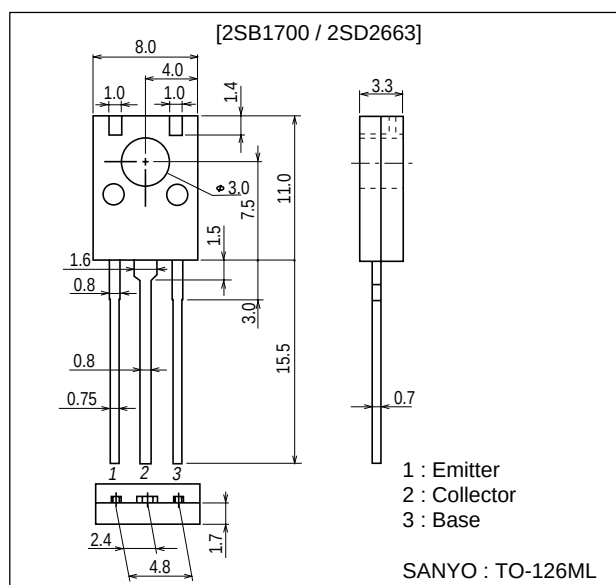
Features

- High DC current gain.
- Large current capacity and wide ASO.
- Micaless package facilitating mounting.

Package Dimensions

unit : mm

2042B



() : 2SB1700

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		(-)110	V
Collector-to-Emitter Voltage	V_{CEO}		(-)100	V
Emitter-to-Base Voltage	V_{EB0}		(-)6	V
Collector Current	I_C		(-)3	A
Collector Current (Pulse)	I_{CP}		(-)5	A
Collector Dissipation	P_C		1.5	W
		$T_c=25^\circ\text{C}$	10	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_{CBO}	$V_{CB}=(-)80\text{V}, I_E=0$			(-)0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)5\text{V}, I_C=0$			(-)3.0	mA

Continued on next page.

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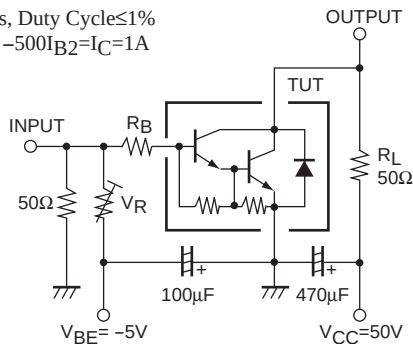
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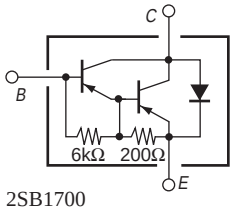
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	h_{FE}	$V_{CE}=(-)3V, I_C=(-)1.5A$	1500	4000		
Gain-Bandwidth Product	f_T	$V_{CE}=(-)5V, I_C=(-)1.5A$		20		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)1.5A, I_B=(-)3mA$		$(-1.0)0.9$	$(-)1.5$	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)1.5A, I_B=(-)3mA$			$(-)2.0$	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)5mA, I_E=0$	$(-)110$			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)50mA, R_{BE}=\infty$	$(-)100$			V
Turn-ON Time	t_{on}	See specified Test Circuit.		$(0.8)0.7$		μs
Storage Time	t_{stg}	See specified Test Circuit.		$(2.4)5.0$		μs
Fall Time	t_f	See specified Test Circuit.		1.2		μs

Specified Test Circuit (For PNP, the polarity is reversed.)

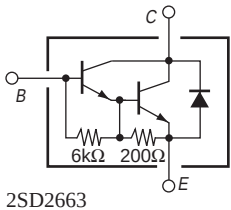
PW=50 μ s, Duty Cycle $\leq$ 1%
500I_{B1}=-500I_{B2}=I_C=1A



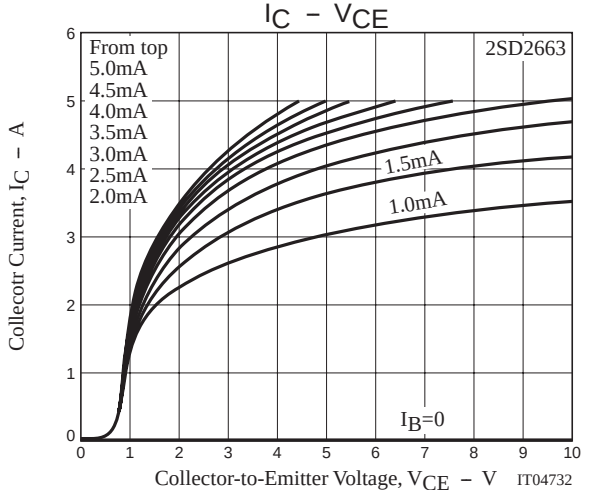
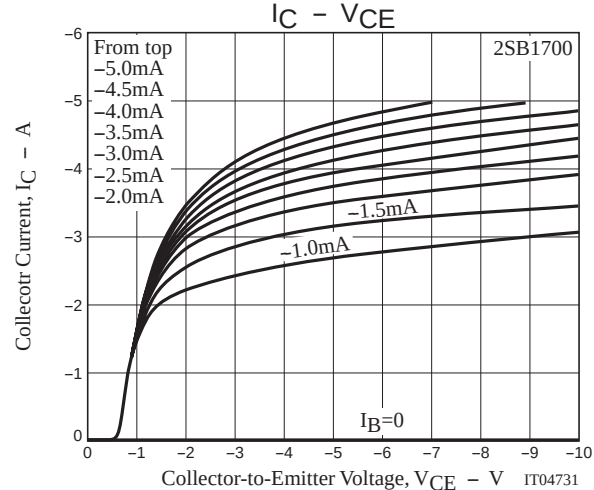
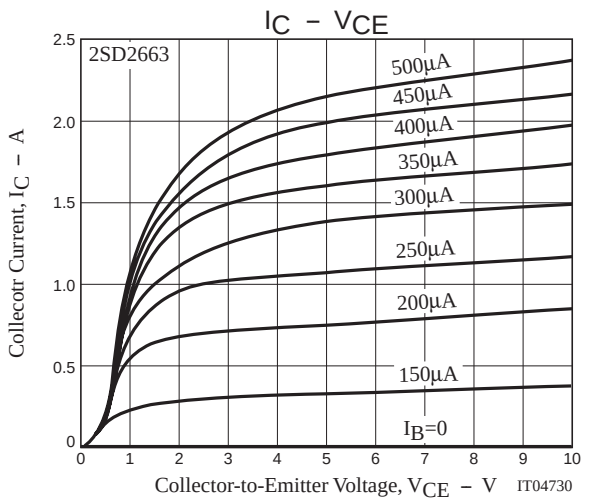
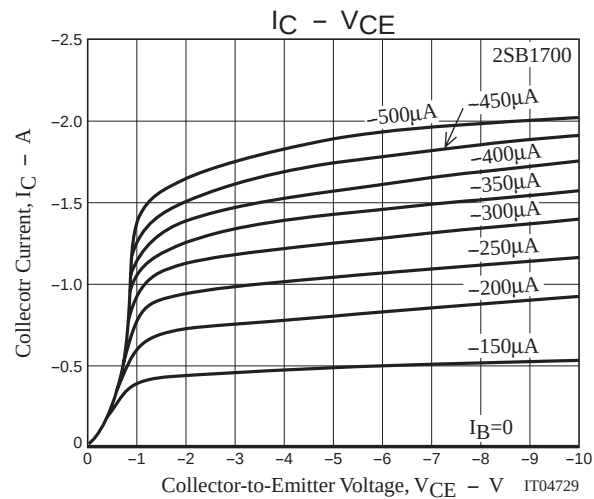
Electrical Connection



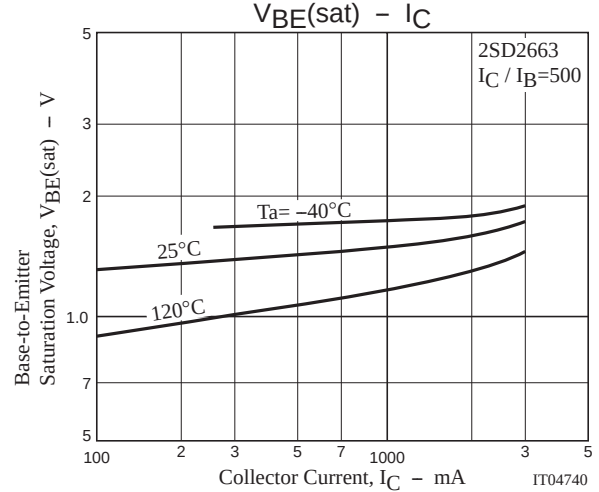
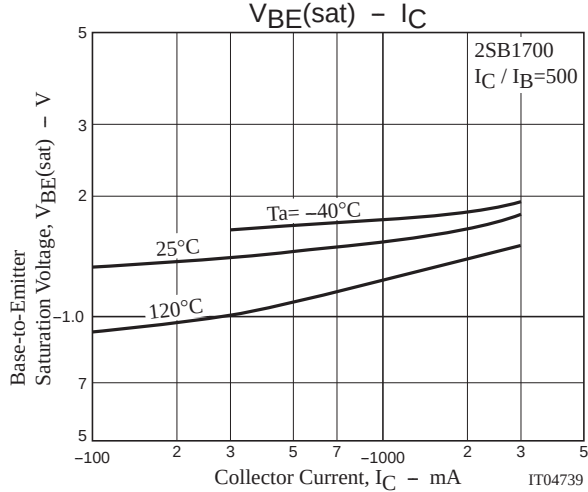
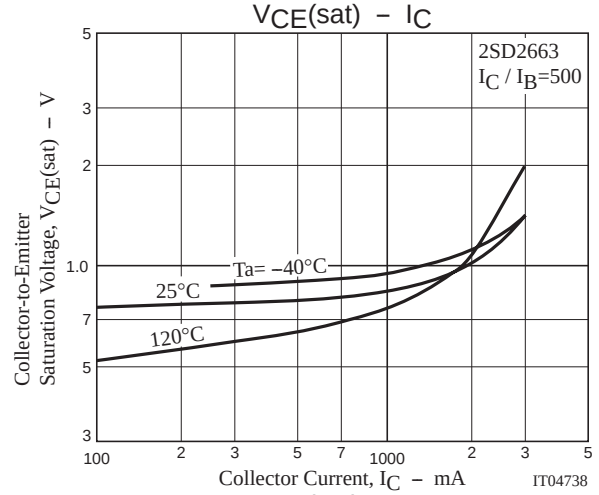
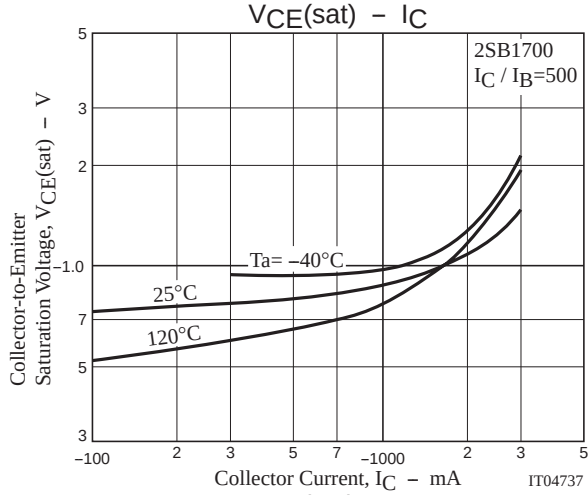
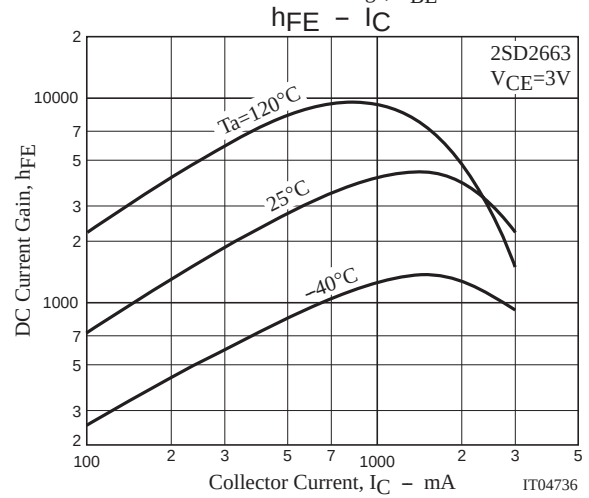
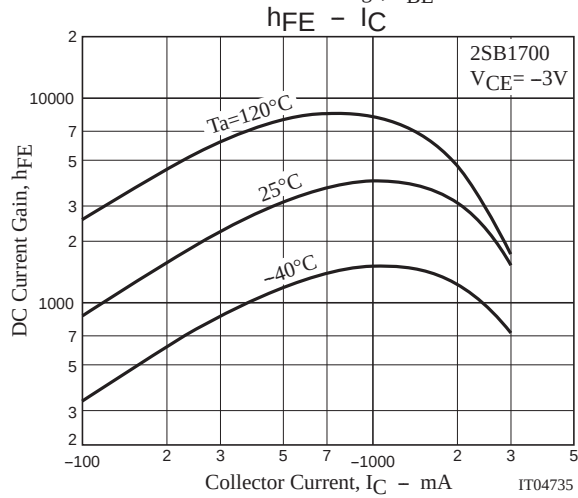
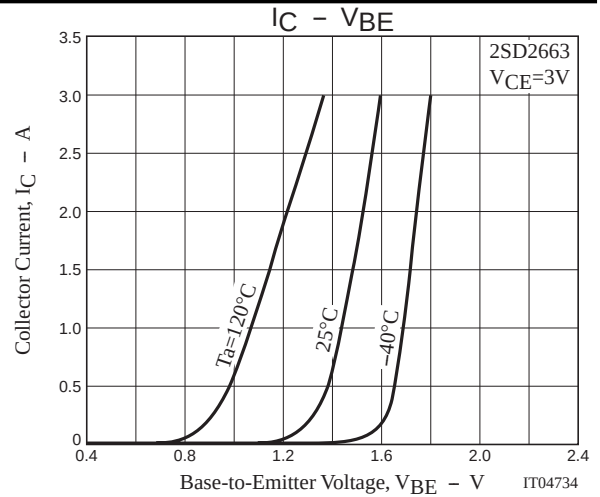
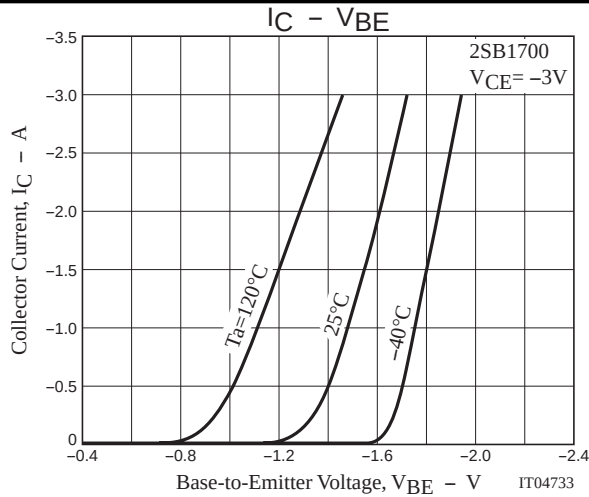
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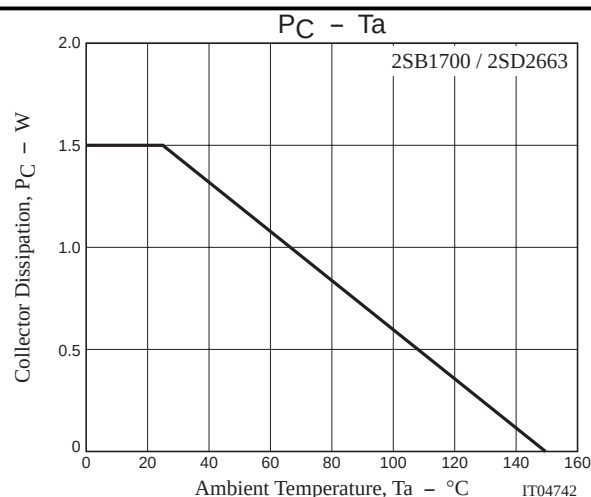
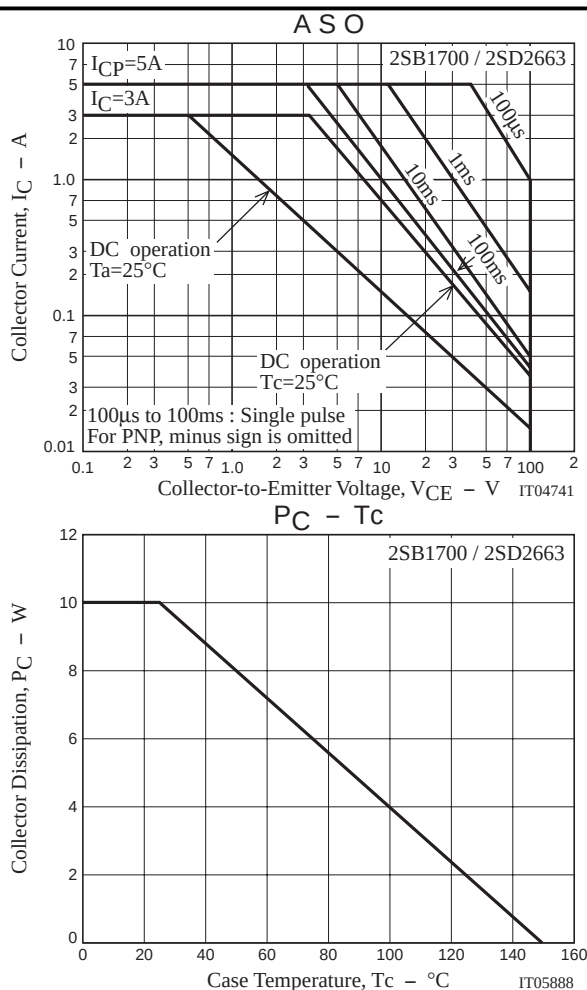
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