



2SB1267/2SD1903

30V/8A High-Current Switching Applications

Applications

- Suitable for relay drivers, high-speed inverters, converters and other general high-current switching.

Features

- Suitable for sets whose height is restricted.
- Low collector to emitter saturation voltage : $V_{CE(sat)} = -0.5V$ (PNP), $0.4V$ (NPN) max.
- Large current capacity.

() : 2SB1267

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-)60	V
Collector-to-Emitter Voltage	V_{CEO}		(-)30	V
Emitter-to-Base Voltage	V_{EBO}		(-)6	V
Collector Current	I_C		(-)8	A
Collector Current (Pulse)	I_{CP}		(-)15	A
Collector Dissipation	P_C		1.65	W
		$T_c = 25^\circ C$	30	W
Junction Temperature	T_J		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Electrical Characteristics at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)40V, I_E = 0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			(-)0.1	μA
DC Current Gain	h_{FE1}	$V_{CE} = (-)2V, I_C = (-)1A$	70*		280*	
	h_{FE2}	$V_{CE} = (-)2V, I_C = (-)4A$	30			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)5V, I_C = (-)1A$		120		MHz

* : The 2SB1267/2SD1903 are classified by $1A h_{FE}$ as follows :

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Rank	Q	R	S
h_{FE}	70 to 140	100 to 200	140 to 280

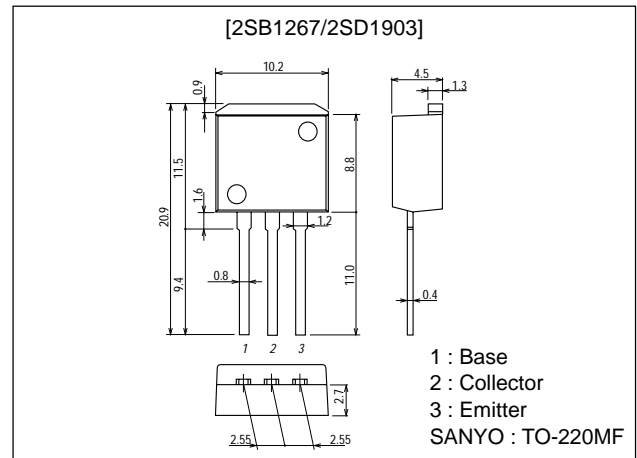
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Package Dimensions

unit:mm

2049C

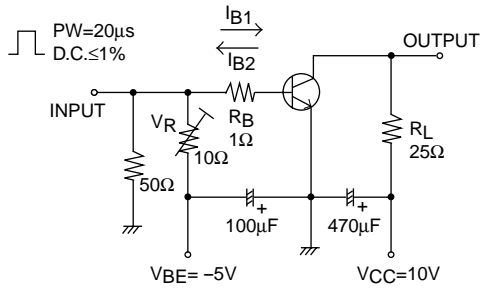


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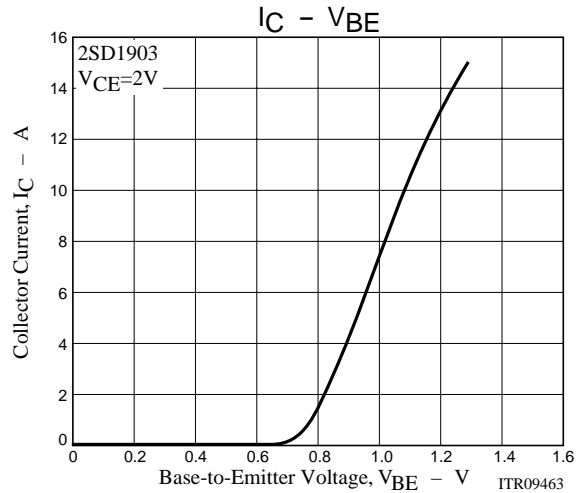
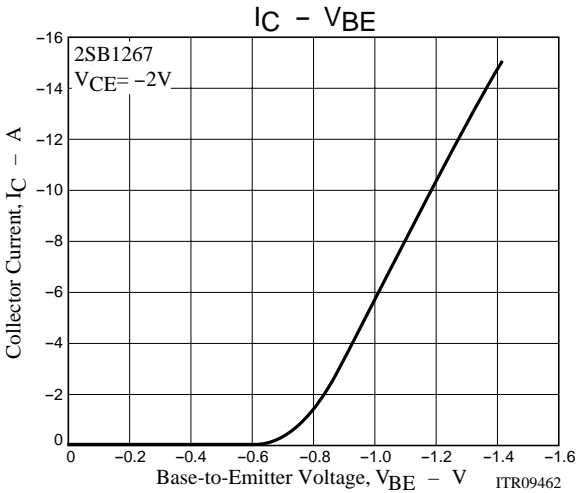
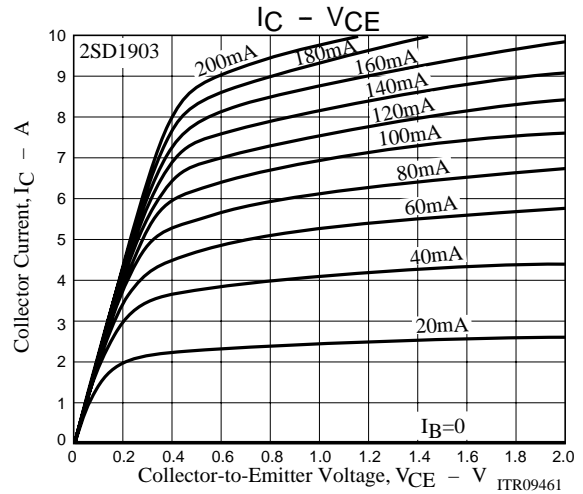
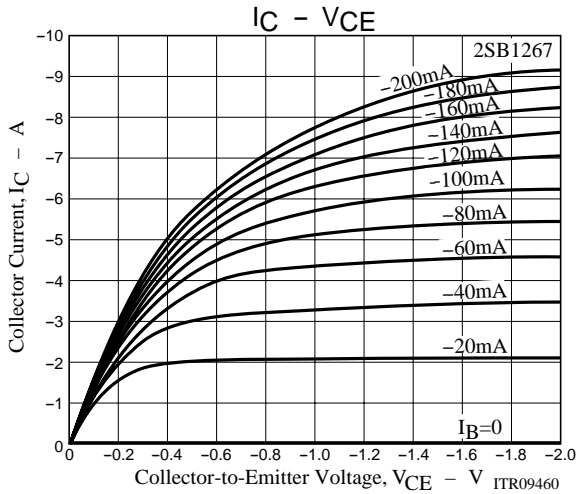
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)3A, I_B=(-)0.15A$			0.4	V
					(-0.5)	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)1mA, I_E=0$	(-60)			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-30)			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)1mA, I_C=0$	(-6)			V
Turn-ON Time	t_{on}	See specified test circuit.		0.1		μs
Storage Time	t_{stg}	See specified test circuit.		(0.2)		μs
				0.5		μs
Fall Time	t_f	See specified test circuit.		0.03		μs

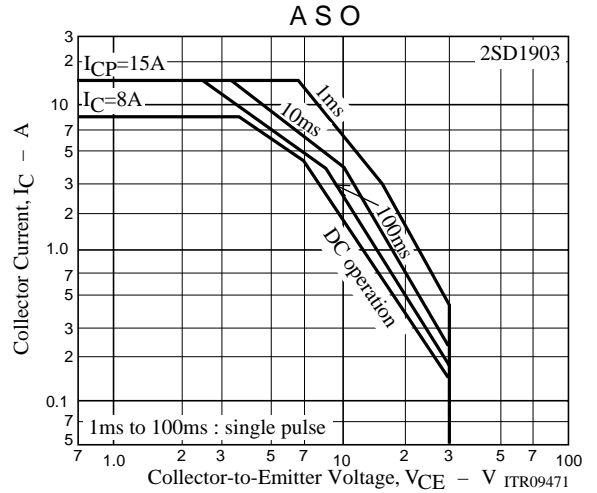
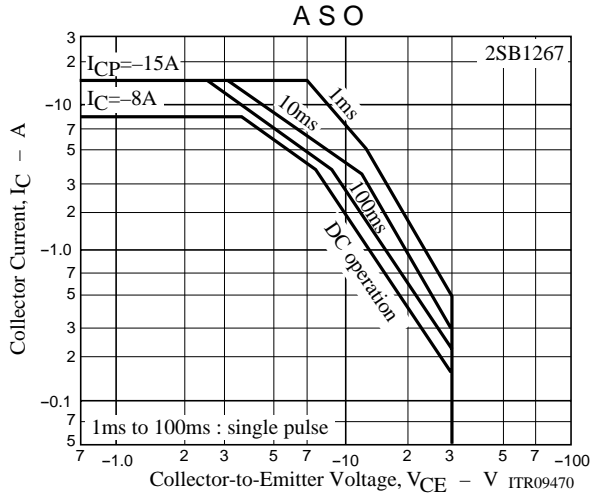
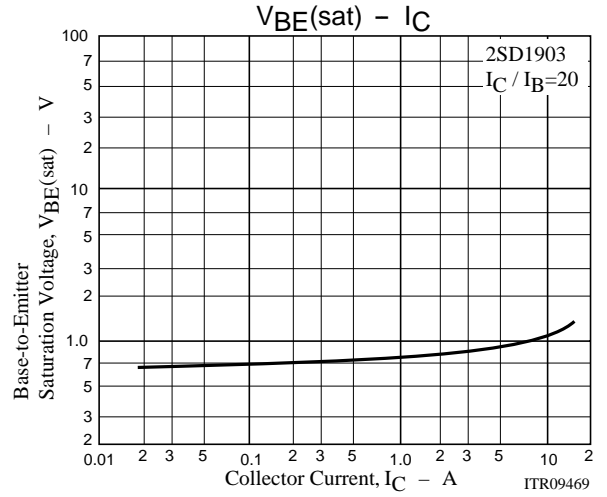
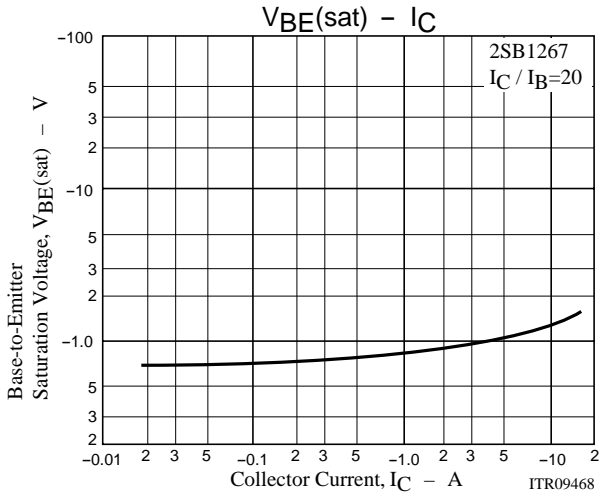
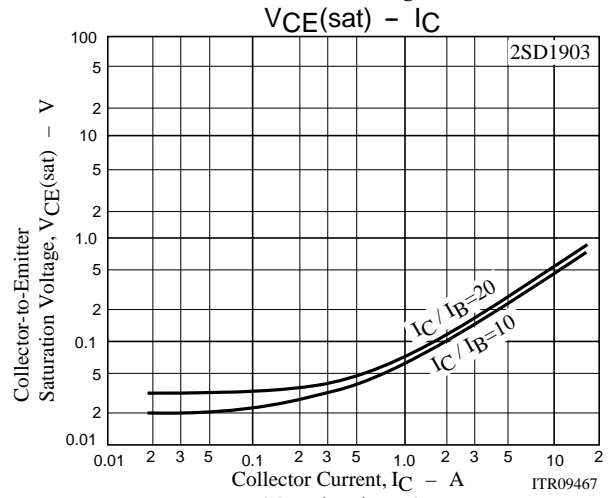
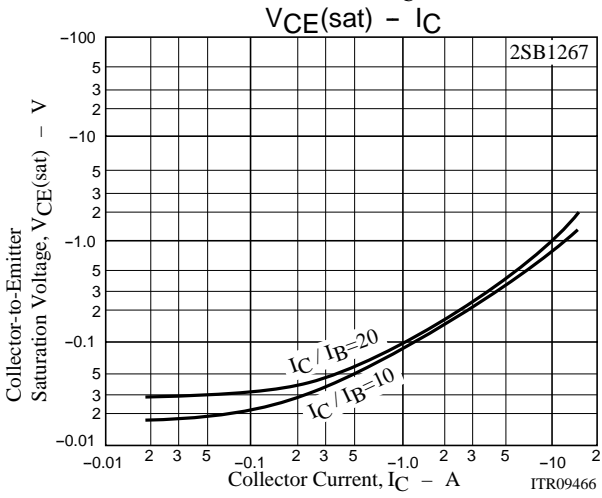
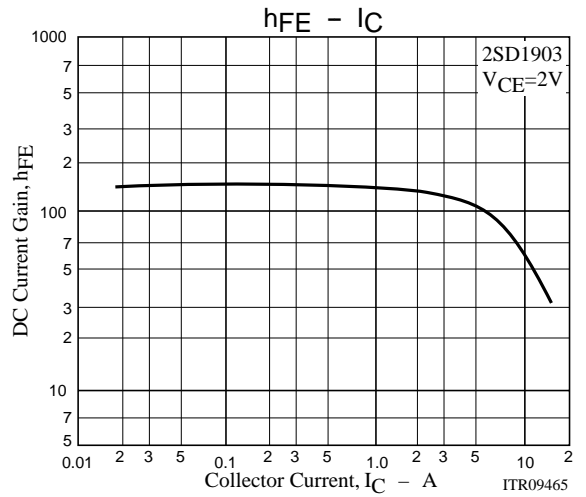
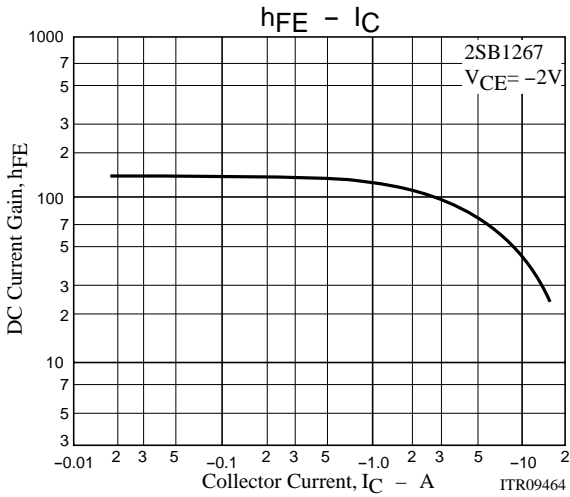
Switching Time Test Circuit



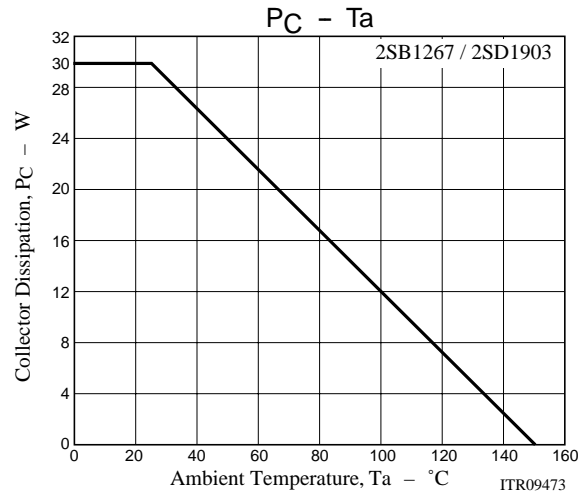
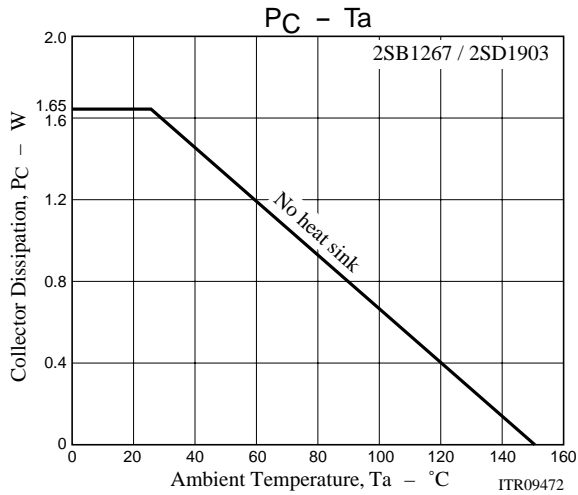
$I_C=20I_{B1} = -20I_{B2}=4A$
 (For PNP, the polarity is reversed.)



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