



2SB1468/2SD2219

30V/8A High-Speed Switching Applications

Applications

- Relay drivers, high-speed inverters, converters, etc.

Features

- Micaless package facilitating mounting.
- Low collector-to-emitter saturation voltage :
 $V_{CE(sat)} = -0.5V$ (PNP), $0.4V$ (NPN) max.
- Large current capacity.

() : 2SB1468

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		(-) 60	V
Collector-to-Emitter Voltage	V_{CE0}		(-) 30	V
Emitter-to-Base Voltage	V_{EB0}		(-) 6	V
Collector Current	I_C		(-) 12	A
Collector Current (Pulse)	I_{CP}		(-) 20	A
Collector Dissipation	P_C		2	W
		$T_c = 25^\circ C$	25	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_{CB0}	$V_{CB} = (-)40V, I_E = 0$			(-) 0.1	mA
Emitter Cutoff Current	I_{EB0}	$V_{EB} = (-)4V, I_C = 0$			(-) 0.1	mA
DC Current Gain	h_{FE1}^*	$V_{CE} = (-)2V, I_C = (-)1A$	70^*		280^*	
	h_{FE2}	$V_{CE} = (-)2V, I_C = (-)6A$	30			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)5V, I_C = (-)1A$		120		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)5A, I_B = (-)0.25A$			(-) 0.5	V
					0.4	V

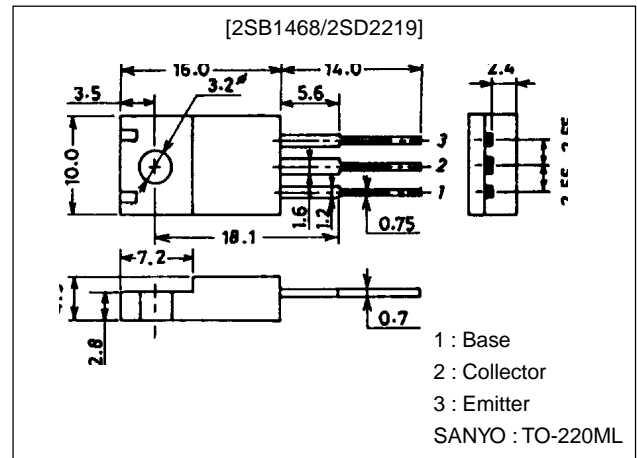
* : The 2SB1468/2SD2219 are classified by $1A h_{FE}$ as follows :

70	Q	140	100	R	200	140	S	280
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Package Dimensions

unit:mm

2041A



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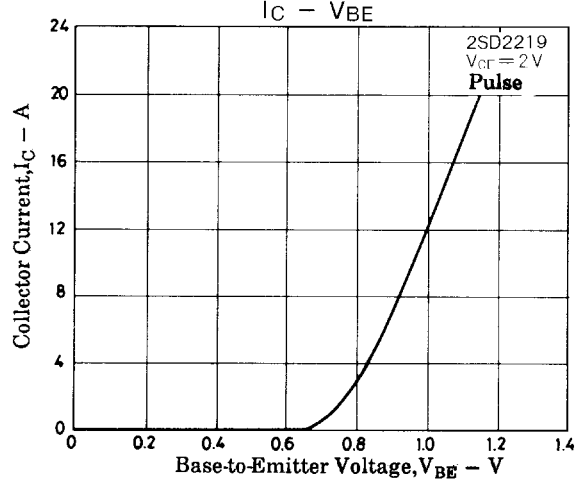
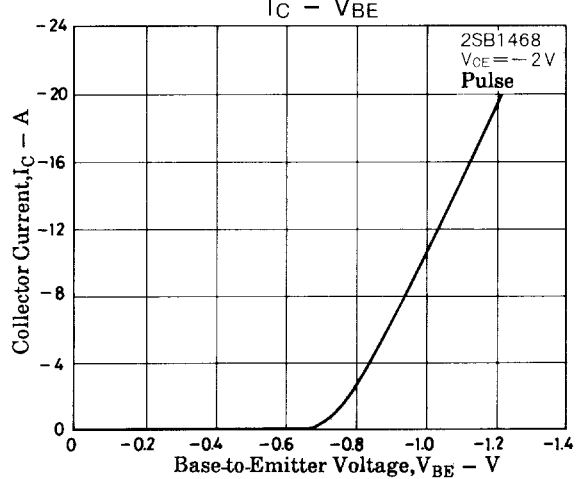
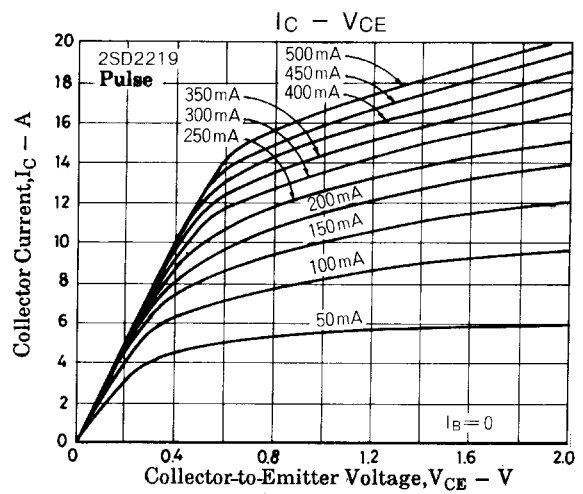
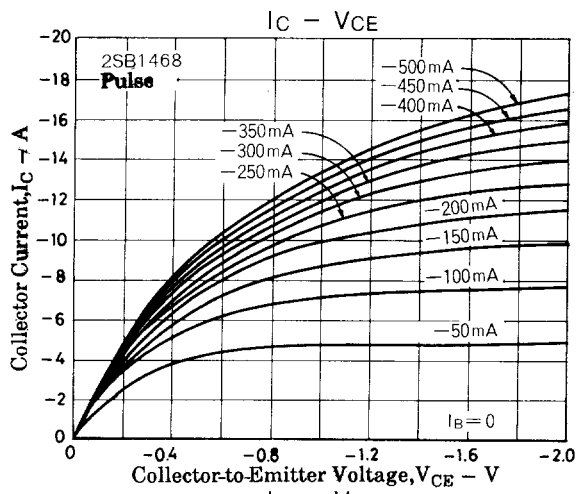
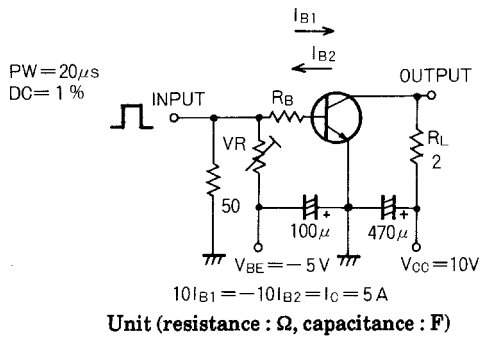
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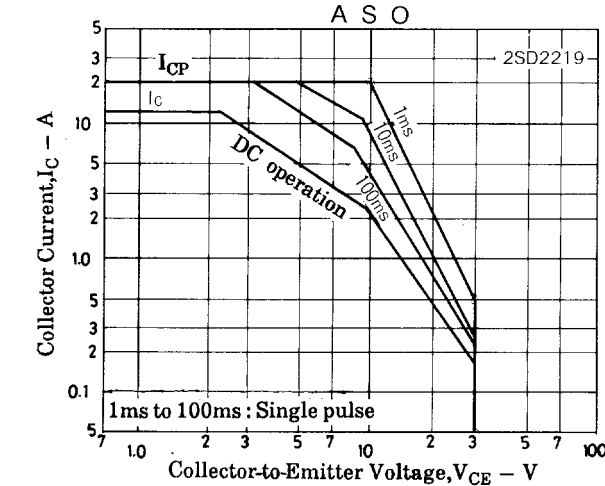
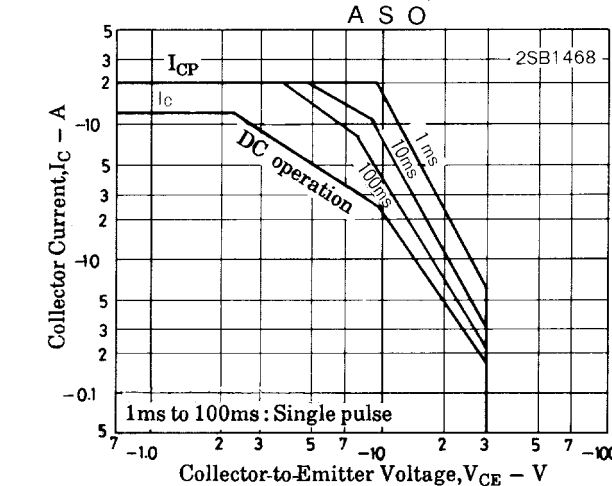
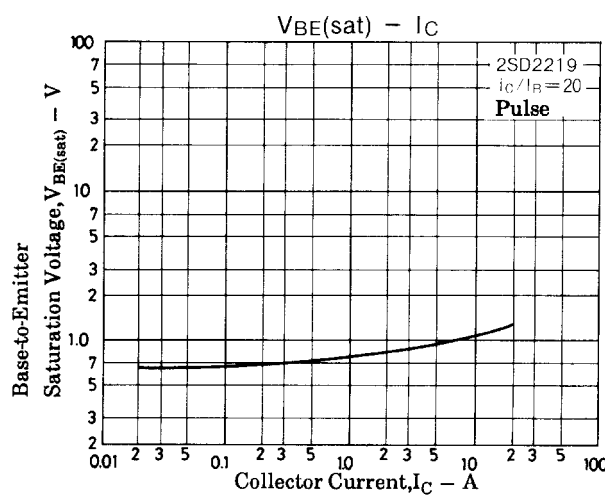
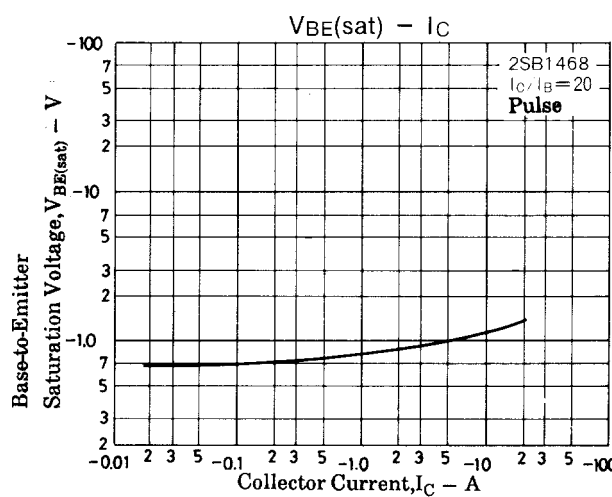
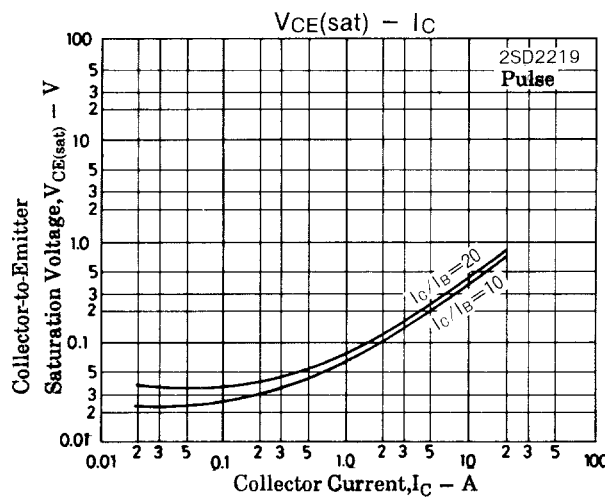
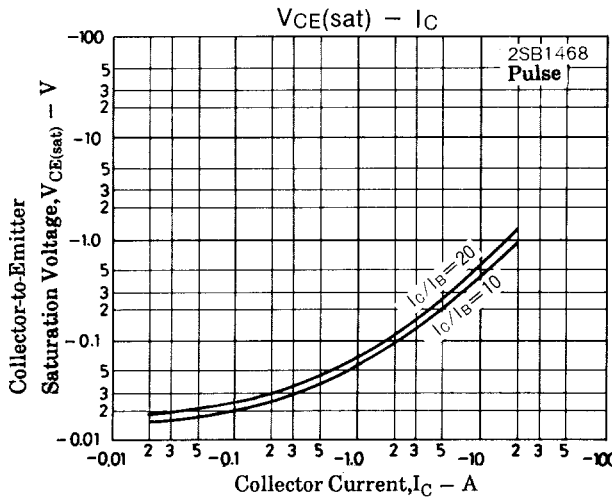
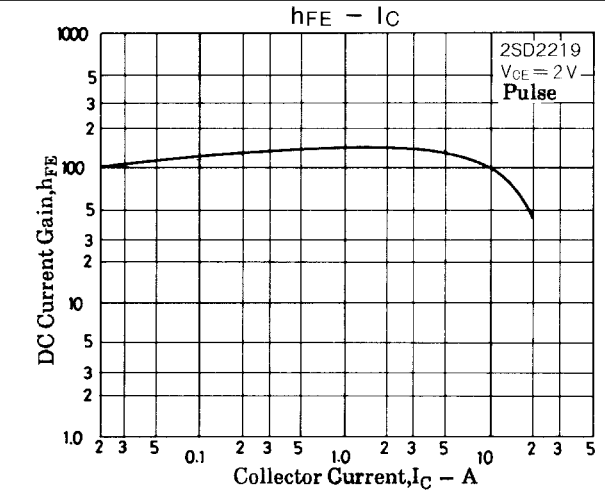
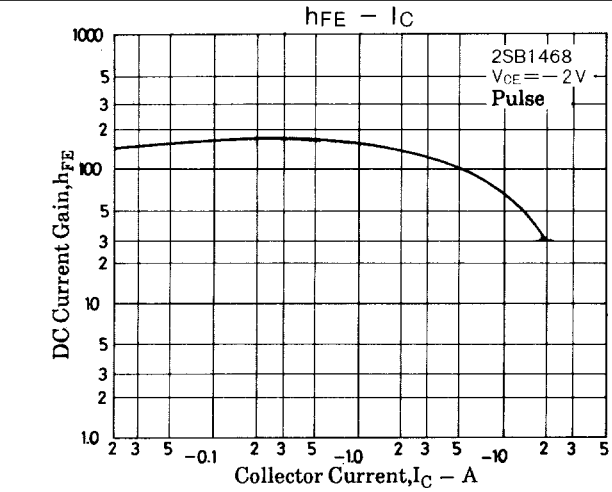
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)1mA, I_E = 0$	(-)60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)30			V
Emitter-to-Base 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
				0.2		μs
Storage Time	t_{stg}	See specified test circuit.		(0.3)		μs
				0.5		μs
Fall Time	t_f	See specified test circuit.		0.03		μs

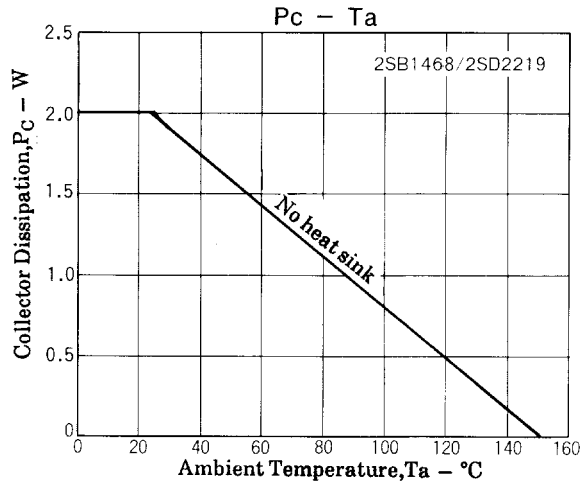
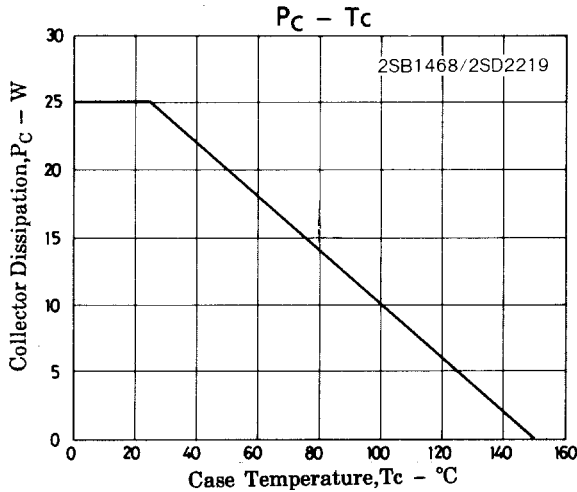
Switching Time Test Circuit



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