



2SB1468/2SD2219

30V/8A High-Speed Switching Applications

Applications

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

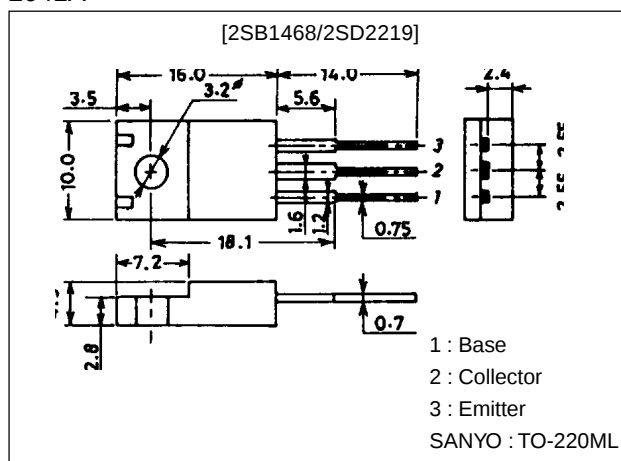
Features

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

Package Dimensions

unit:mm

2041A



() : 2SB1468

Specifications

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

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		$(-)-12$	A
Collector Current (Pulse)	I_{CP}		$(-)-20$	A
Collector Dissipation	P_C		2	W
		$T_c = 25^\circ\text{C}$	25	W
Junction Temperature	T_J		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to $+150$	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)40V, I_E = 0$			$(-)-0.1$	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			$(-)-0.1$	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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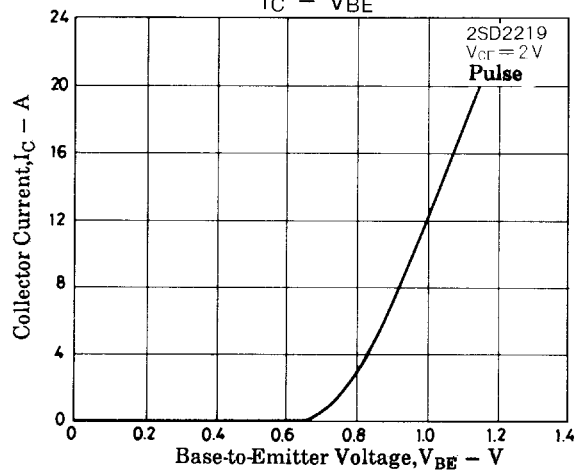
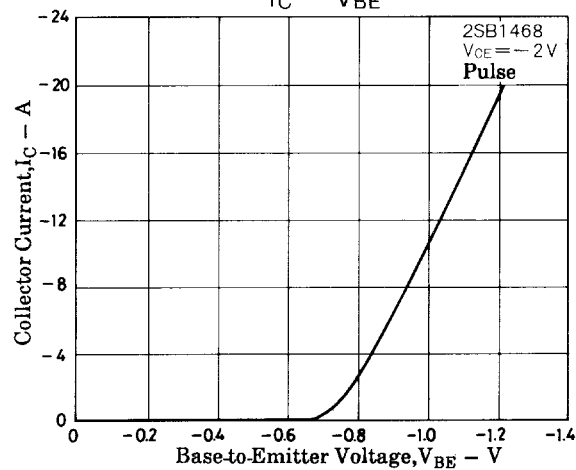
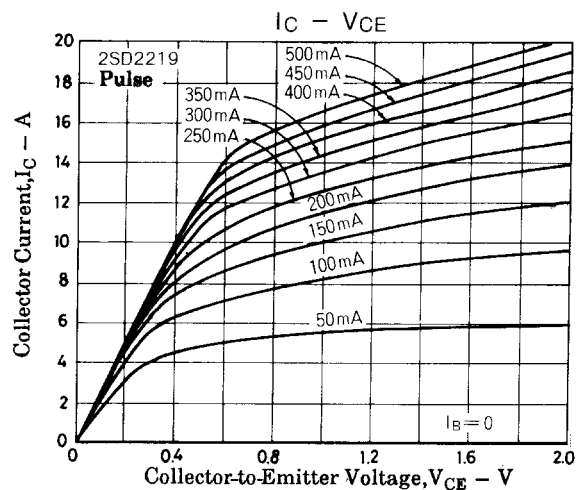
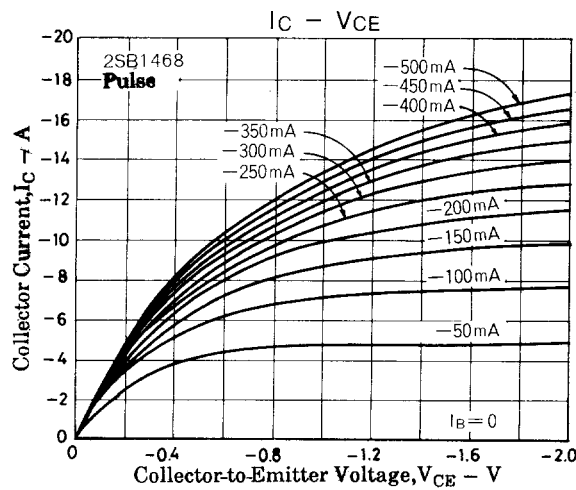
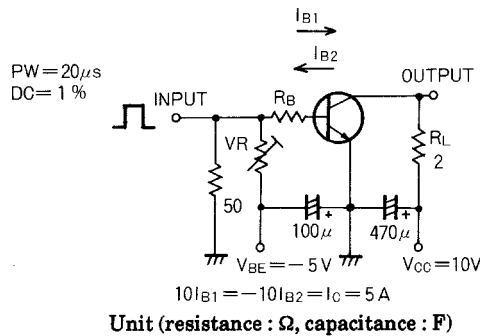
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O2098HA (KT)/9140MH, JK (KOTO) No.3364-1/4

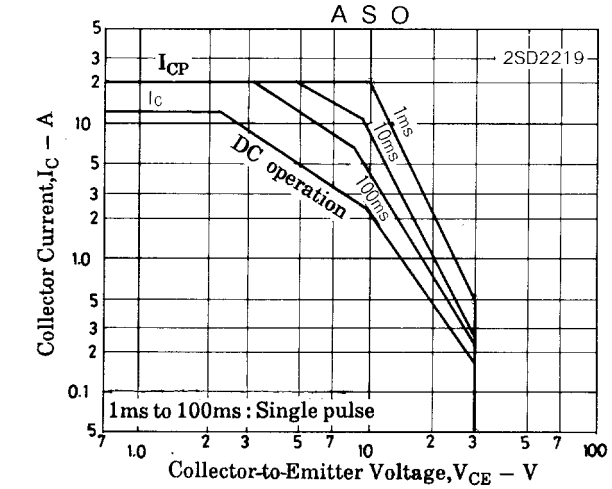
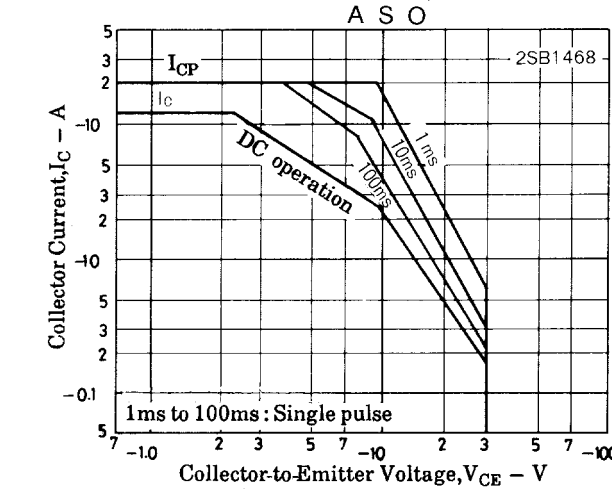
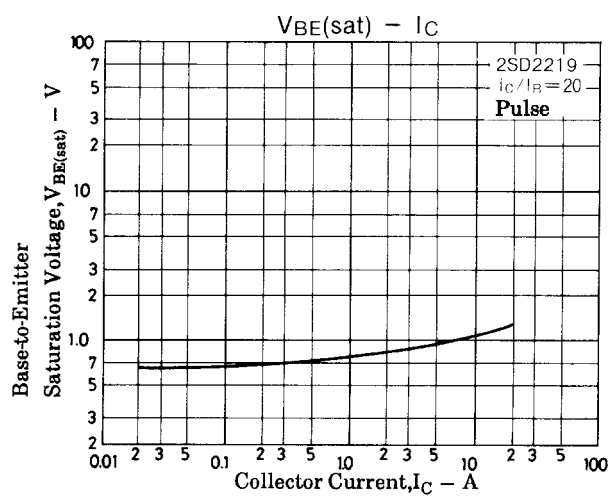
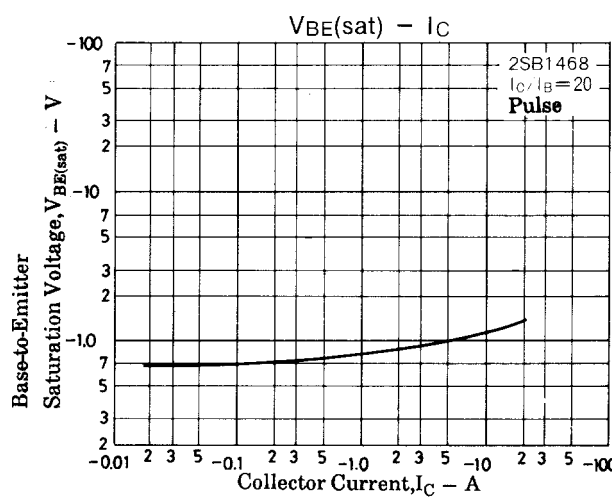
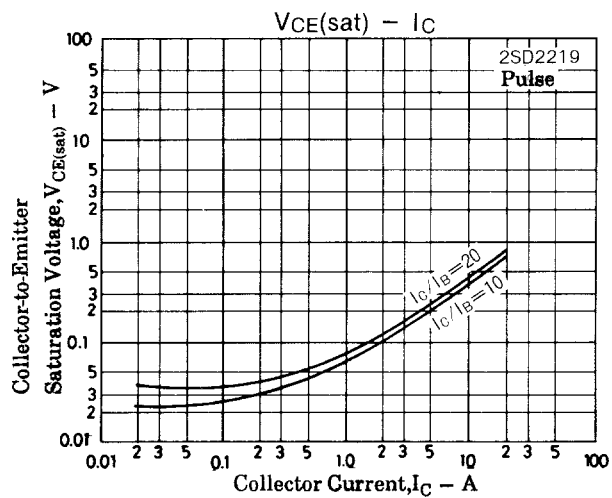
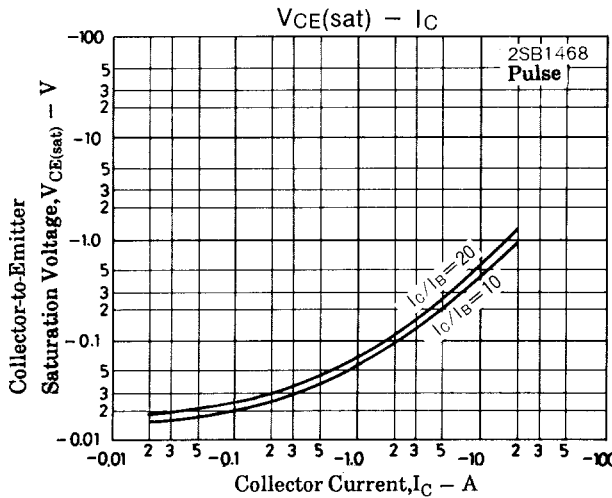
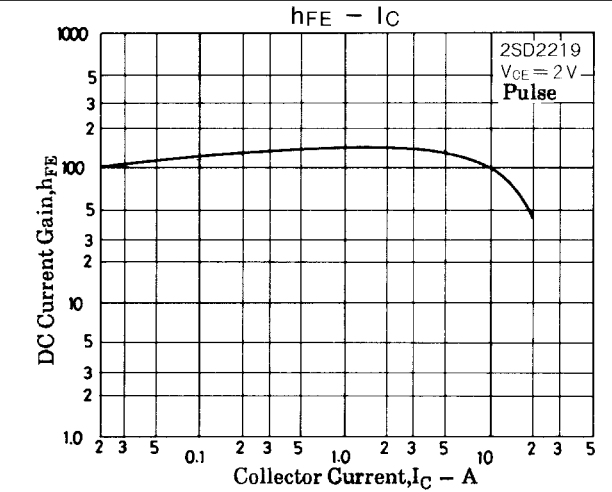
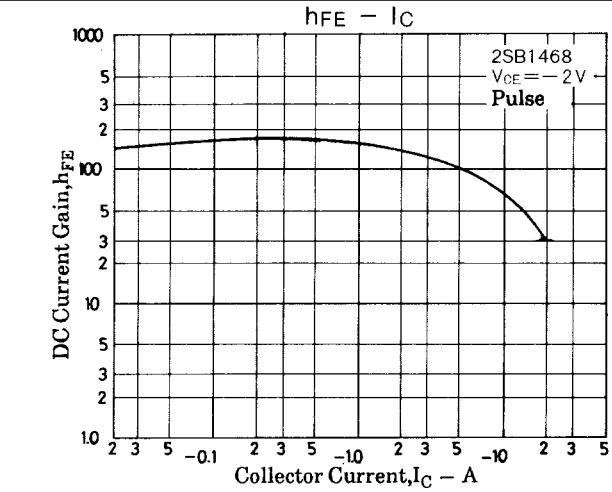
2SB1468/2SD2219

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

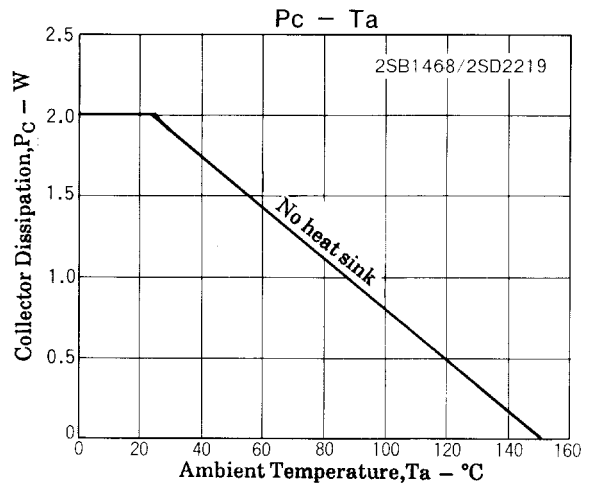
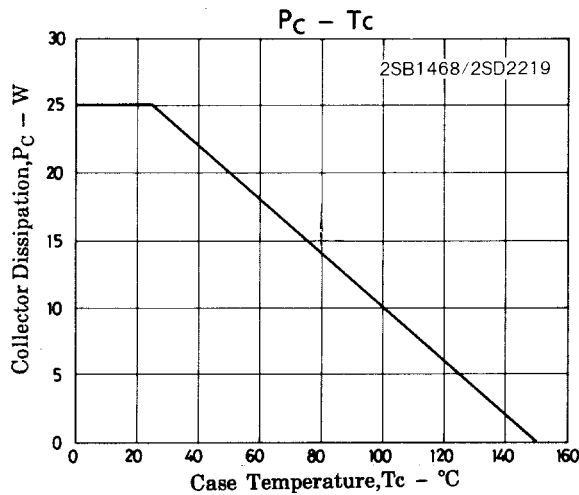
Switching Time Test Circuit



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