

SANYO**2SB1507/2SD2280****50V/7A High-Current Switching Applications****Applications**

- Relay drivers, high-speed inverters, converters.

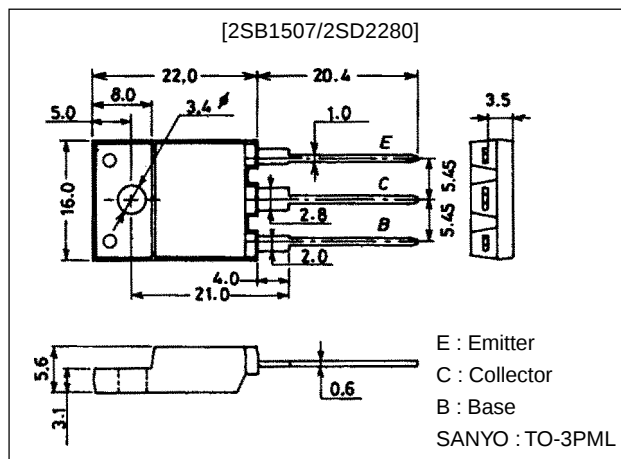
Features

- Low collector-to-emitter saturation voltage :
 $V_{CE(sat)} = (-)0.4V$ max.
- Wide ASO and highly resistant to breakdown.
- Micaless package facilitating easy mounting.

Package Dimensions

unit:mm

2039A



() : 2SB1507

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}		$(-)50$	V
Emitter-to-Base Voltage	V_{EBO}		$(-)6$	V
Collector Current	I_C		$(-)7$	A
Collector Current (Pulse)	I_{CP}		$(-)20$	A
Collector Dissipation	P_C		3.0	W
		$T_c = 25^\circ C$	40	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}	$V_{CB} = (-)40V, I_E = 0$			$(-)0.1$	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}	$V_{CE} = (-)2V, I_C = (-)5A$	30			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)5V, I_C = (-)1A$		10		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)4A, I_B = (-)0.4A$			$(-)0.4$	V

* : The 2SB1507/2SD2280 are classified by $1A h_{FE}$ as follows :

70	Q	140	100	R	200	140	S	280
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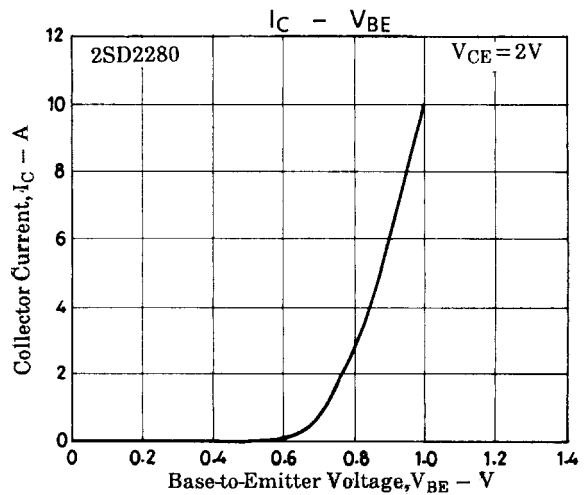
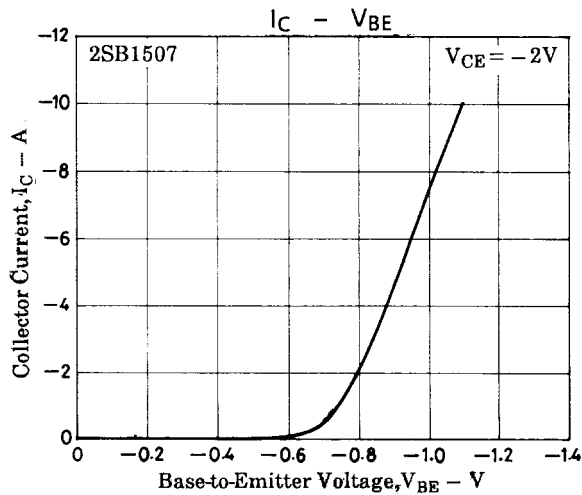
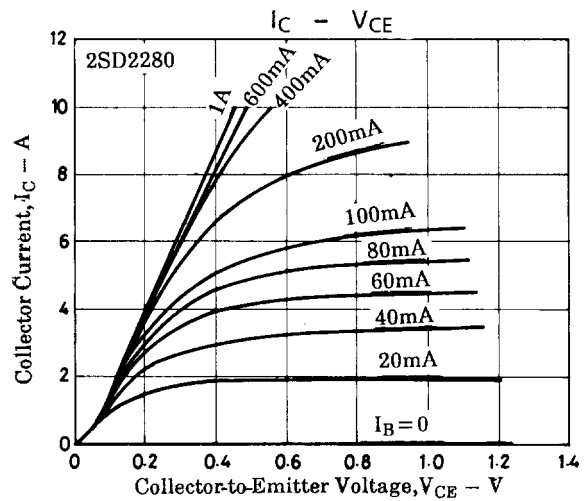
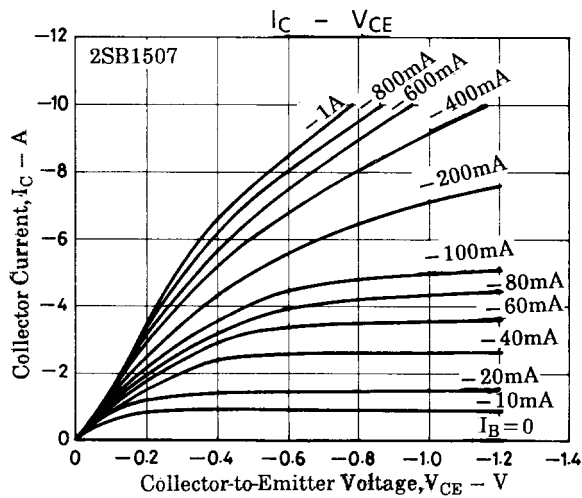
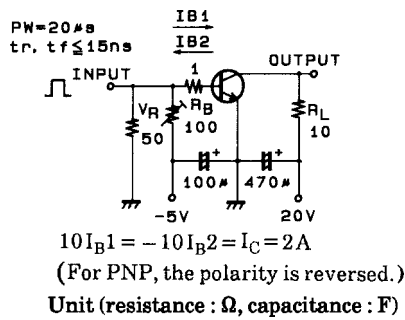
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N1098HA (KT)/5111MH, JK (KOTO) No.3713-1/4

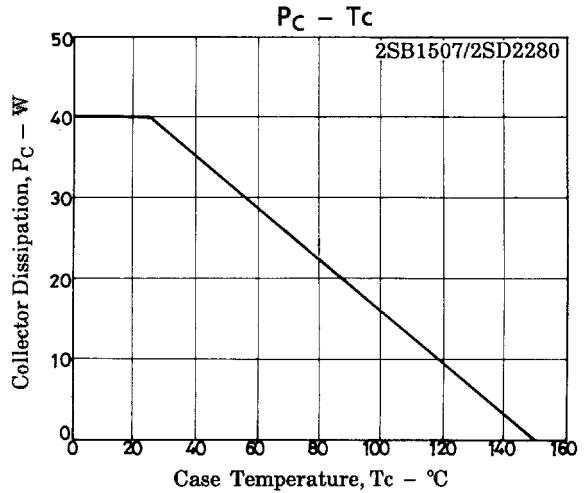
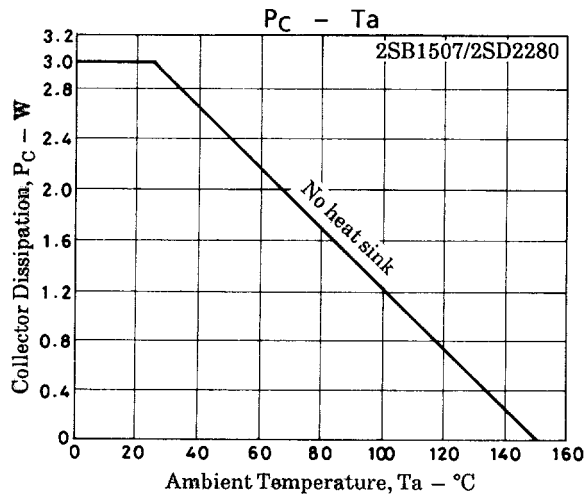
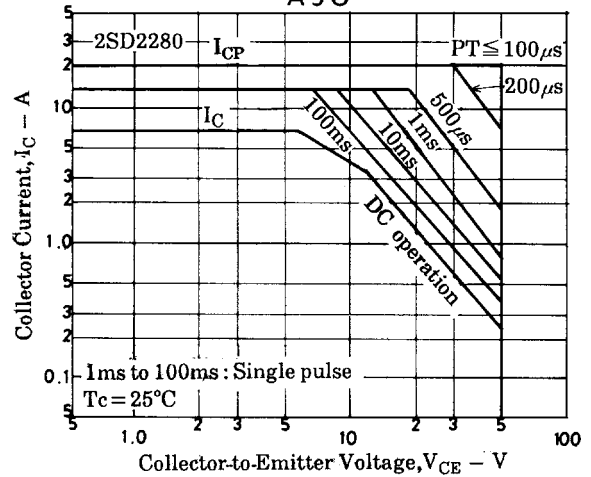
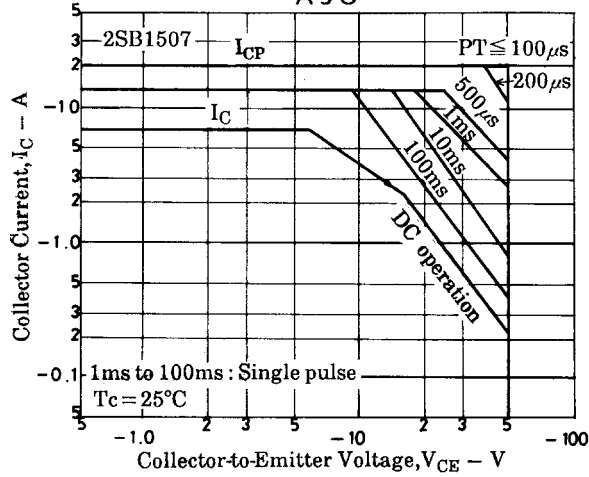
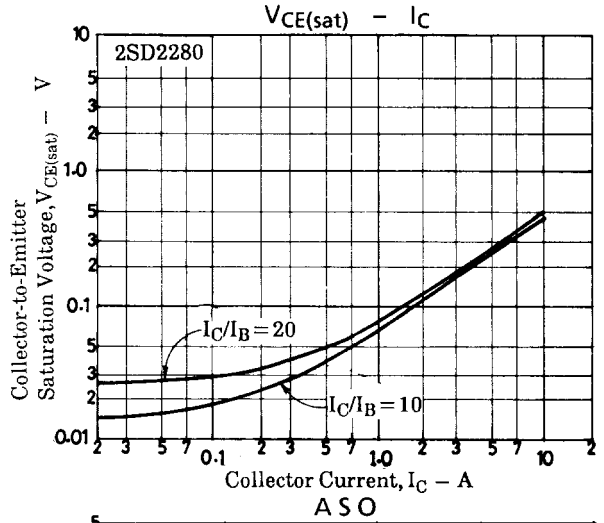
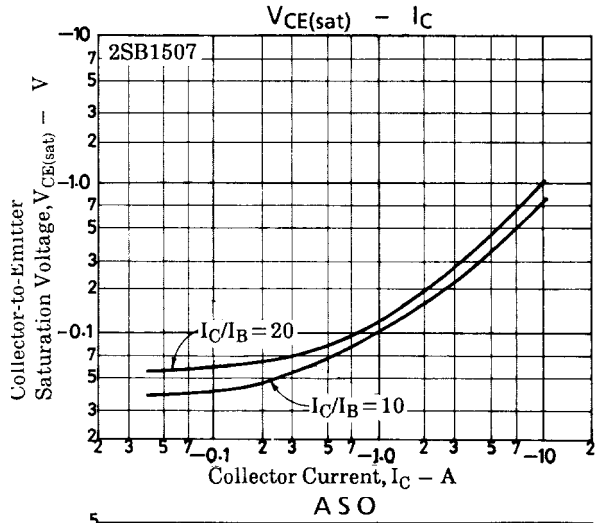
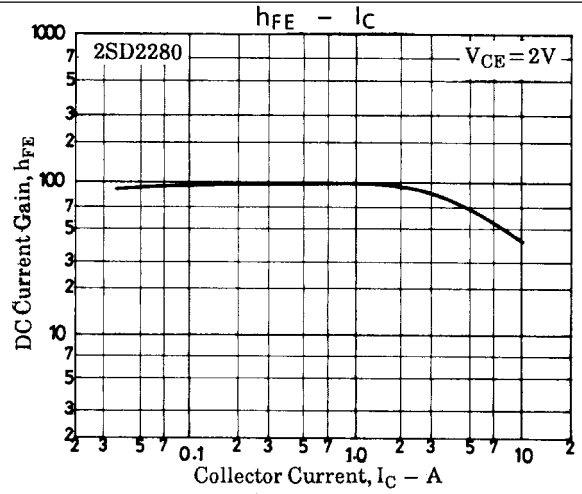
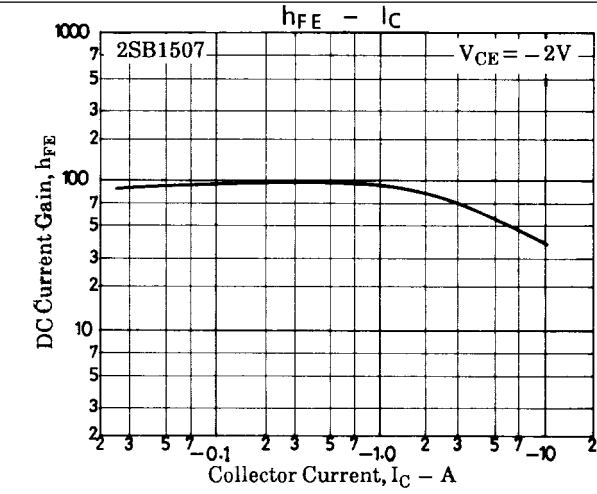
2SB1507/2SD2280

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	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)50			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.		0.2		μs
Storage Time	t_{stg}	See specified test circuit.		(0.7)		μs
				0.9		μs
Fall Time	t_f	See specified test circuit.		(0.1)		μs
				0.3		μs

Switching Time Test Circuit



2SB1507/2SD2280



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