

SANYO	No.2539B	2SB1215/2SD1815
		PNP/NPN Epitaxial Planar Silicon Transistors

High-Current Switching Applications

Applications

- Relay drivers, high-speed inverters, converters, and other general high-current switching applications.

Features

- Low collector-to-emitter saturation voltage.
- Excellent linearity of h_{FE} .
- Small-sized package permitting 2SB1215/2SD1815-applied sets to be made small and slim.
- High f_T .
- Fast switching time.

() : 2SB1215

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

			unit
Collector-to-Base Voltage	V_{CBO}	(-) 120	V
Collector-to-Emitter Voltage	V_{CEO}	(-) 100	V
Emitter-to-Base Voltage	V_{EBO}	(-) 6	V
Collector Current	I_C	(-) 3	A
Collector Current (Pulse)	I_{CP}	(-) 6	A
Collector Dissipation	P_C	1	W
		20	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to $+150$	$^\circ C$

$T_c = 25^\circ C$

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

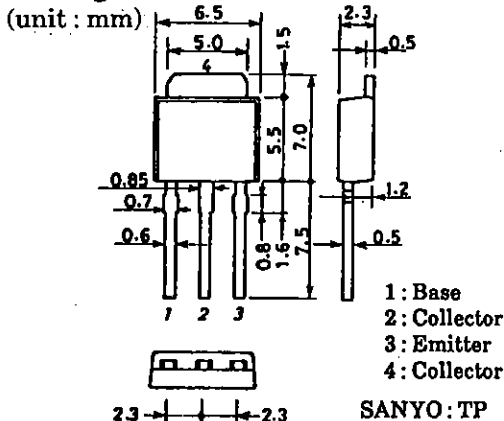
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)100V, I_E = 0$			(-) 1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			(-) 1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = (-)5V, I_C = (-)0.5A$	70^*		400^*	
	$h_{FE(2)}$	$V_{CE} = (-)5V, I_C = (-)2A$	40			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10V, I_C = (-)0.5A$		180		MHz
				(130)		
Output Capacitance	C_{ob}	$V_{CB} = (-)10V, f = 1MHz$		(40) 25		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)1.5A, I_B = (-)0.15A$		150	400	mV
					(-200)(-500)	

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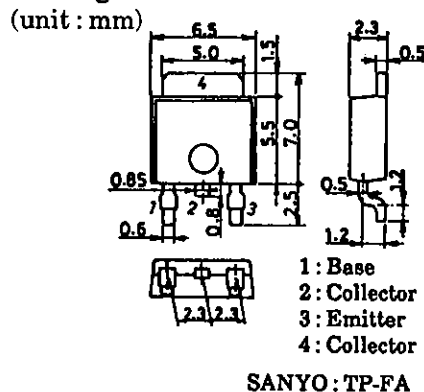
* : The 2SB1215/2SD1815 are classified by 100mA h_{FE} as follows :

70 Q 140	100 R 200	140 S 280	200 T 400
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Package Dimensions 2045B



Package Dimensions 2044B



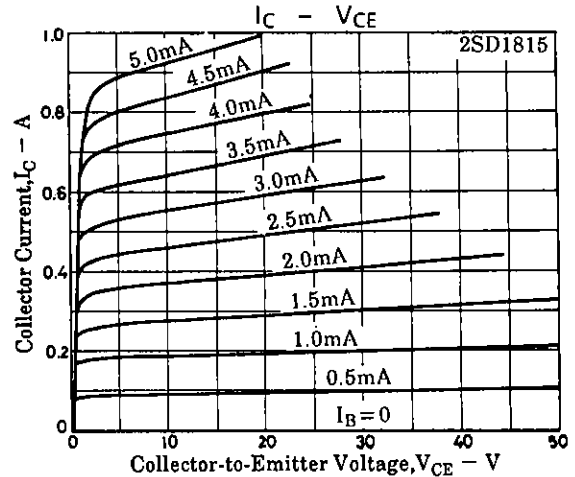
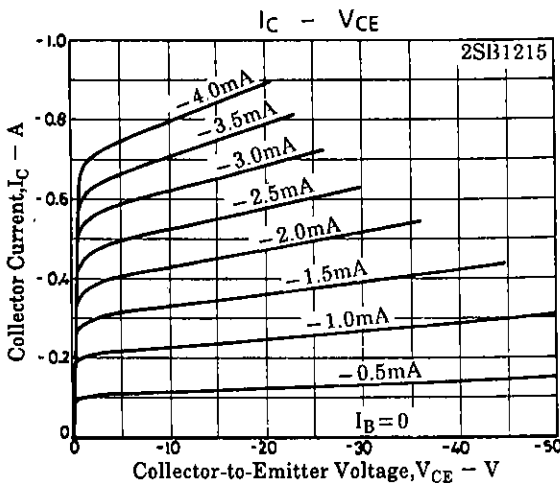
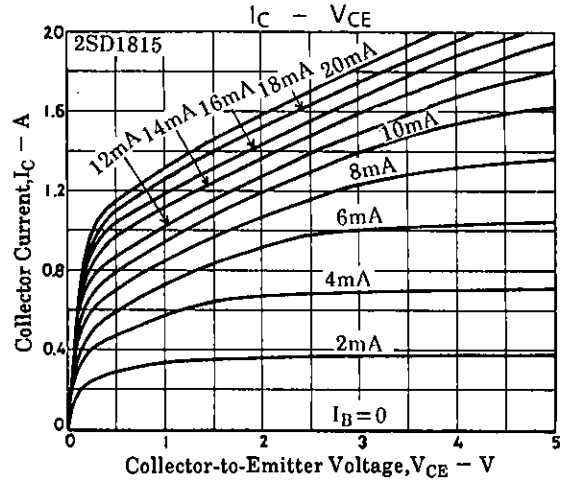
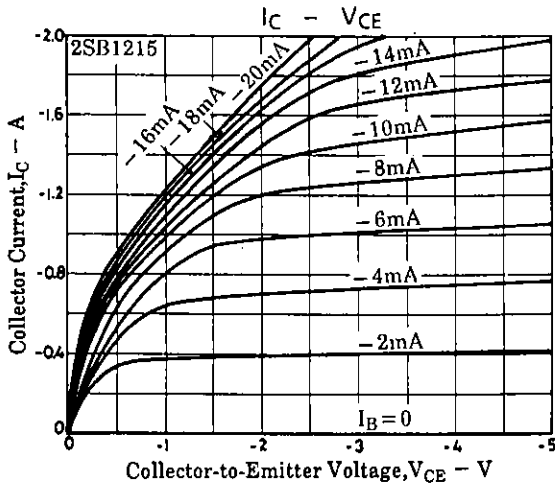
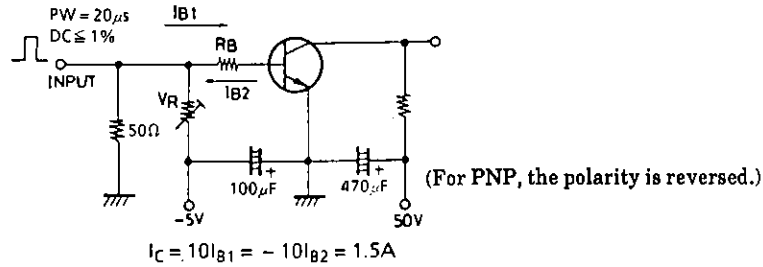
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2SB1215/2SD1815

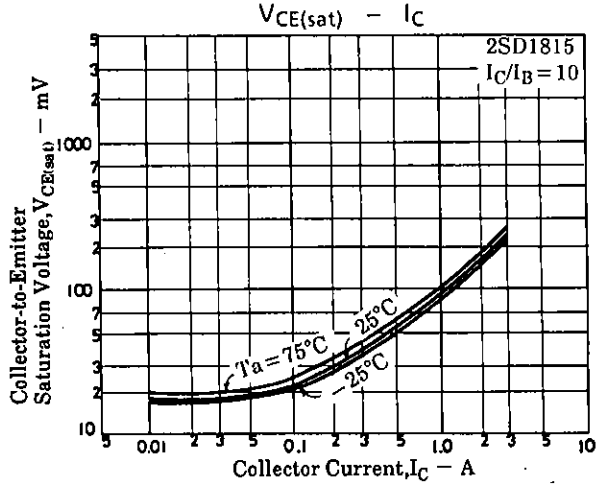
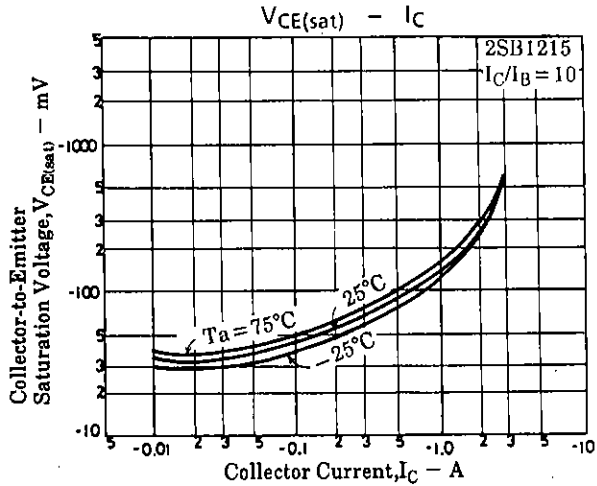
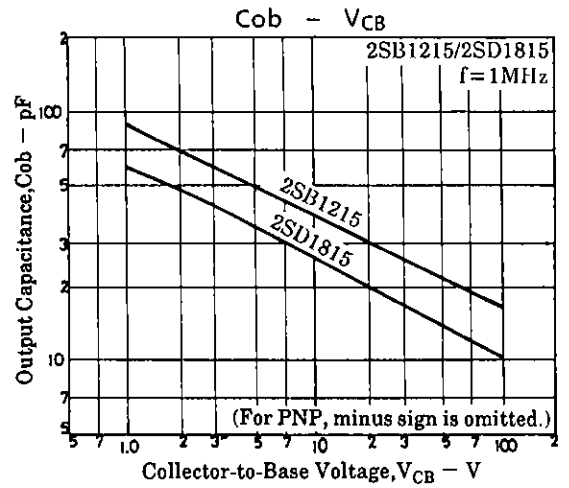
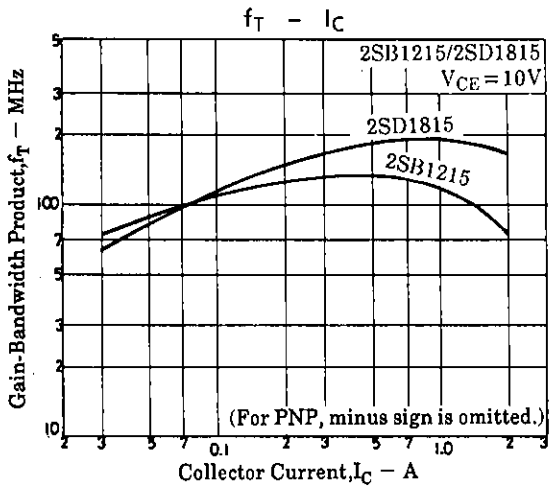
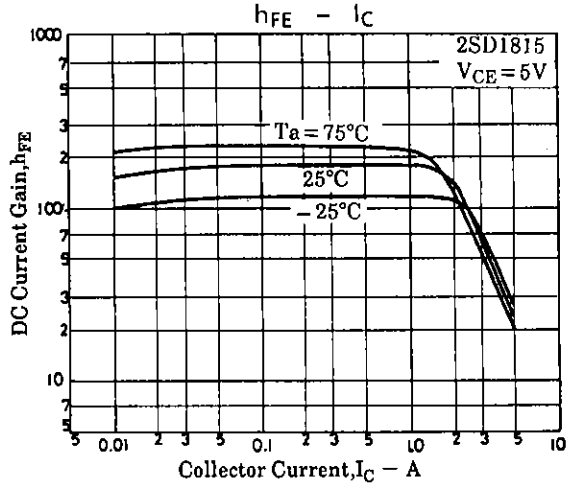
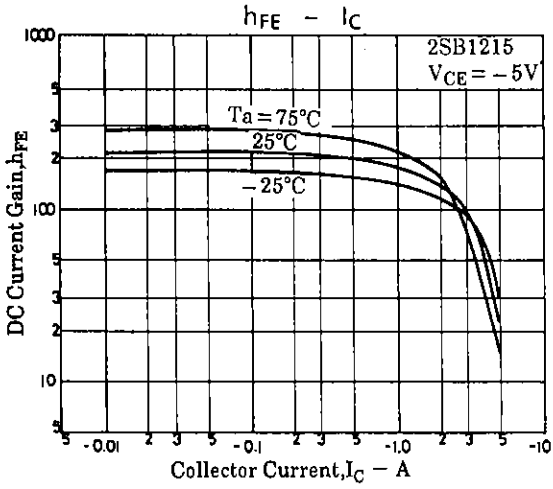
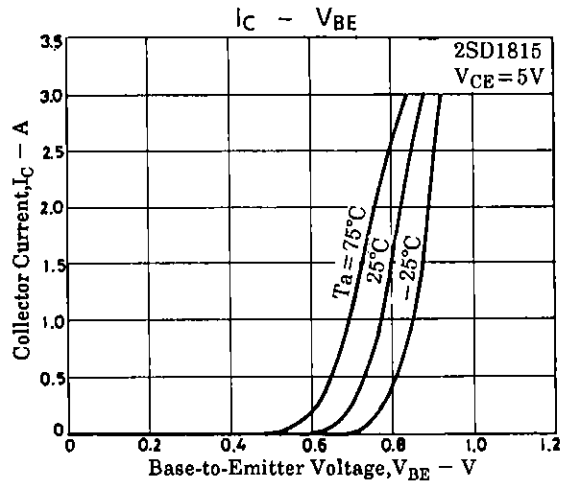
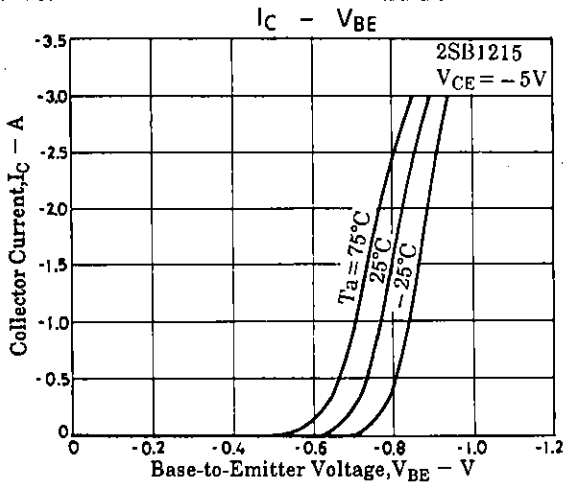
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		min	typ	max	unit
B-E Saturation Voltage	$V_{BE(sat)}$ $I_C = (-)1.5A, I_B = (-)0.15A$		(-)0.9	(-)1.2	V
C-B Breakdown Voltage	$V_{(BR)CBO}$ $I_C = (-)10\mu A, I_E = 0$	(-)120			V
C-E Breakdown Voltage	$V_{(BR)CEO}$ $I_C = (-)1mA, R_{BE} = \infty$	(-)100			V
E-B Breakdown Voltage	$V_{(BR)EBO}$ $I_E = (-)10\mu A, I_C = 0$	(-)6			V
Rise Time	t_{on} See specified Test Circuit.		100		ns
Storage Time	t_{stg} //	(800)	900		ns
Fall Time	t_f //		50		ns

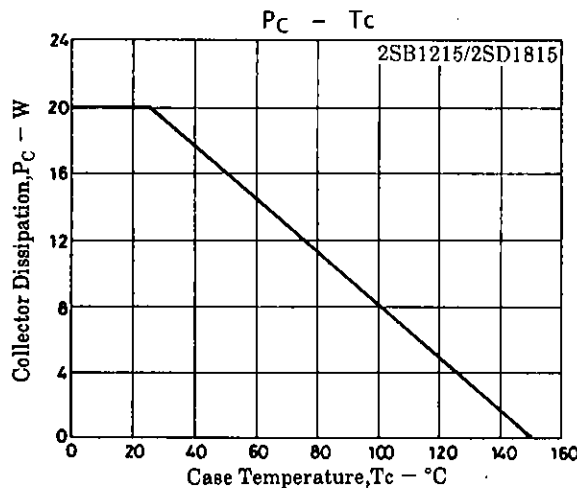
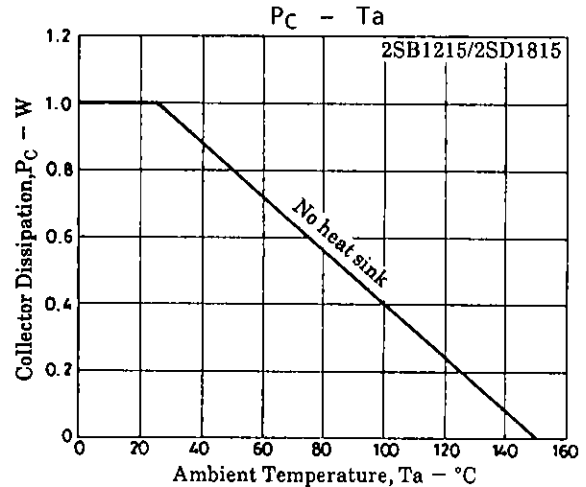
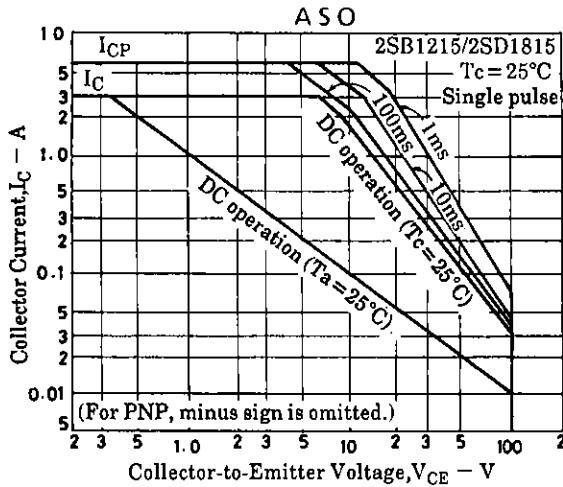
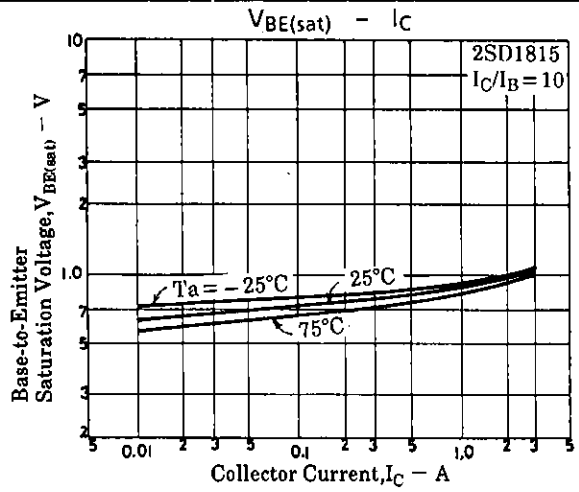
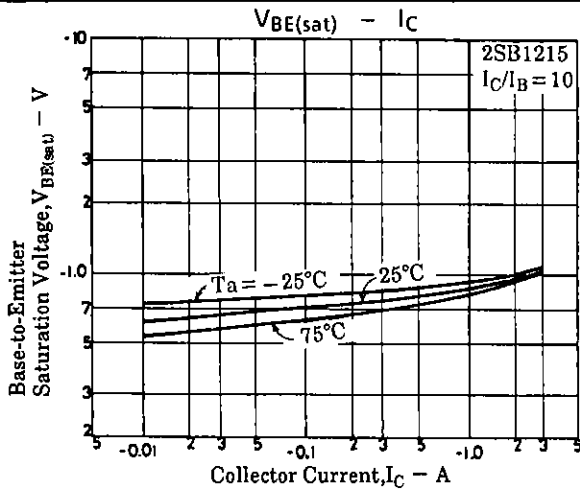
Switching Time Test Circuit



2SB1215/2SD1815



2SB1215/2SD1815



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