

SANYO	No.513H	2SB633/2SD613
		PNP/NPN Epitaxial Planar Silicon Transistors 85V/6A, AF 25 to 35W Output Applications

Features

- High breakdown voltage $V_{CE0}85V$, high current 6A.
- AF25 to 35W output.

(): 2SB633

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

			unit
Collector-to-Base Voltage	V_{CBO}	(-)100	V
Collector-to-Emitter Voltage	V_{CEO}	(-)85	V
Emitter-to-Base Voltage	V_{EBO}	(-)6	V
Collector Current	I_C	(-)6	A
Collector Current (Pulse)	I_{CP}	(-)10	A
Collector Dissipation	P_C	40	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 $T_a = 25^\circ C$

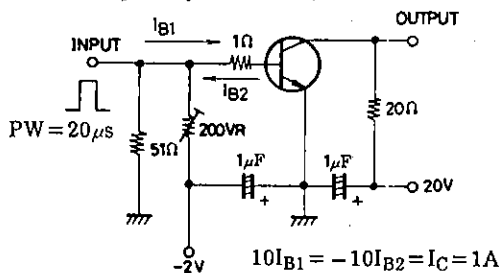
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)40V, I_E = 0$			(-)0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			(-)0.1	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = (-)5V, I_C = (-)1A$	40*		320*	
	$h_{FE(2)}$	$V_{CE} = (-)5V, I_C = (-)3A$	20			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)5V, I_C = (-)1A$		15		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)4A, I_B = (-)0.4A$			(-)2.0	V
B-E Rise Voltage	V_{BE}	$V_{CE} = (-)5A, I_C = (-)1A$			(-)1.5	V
Output Capacitance	C_{ob}	$V_{CB} = (-)10V, f = 1MHz$		(150)110		pF
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)5mA, I_E = 0$	(-)100			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)5mA, R_{BE} = \infty$	(-)85			V
	$V_{(BR)CEO}$	$I_C = (-)50mA, R_{BE} = \infty$	(-)85			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)5mA, I_C = 0$	(-)6			V
Turn-ON Time	t_{on}	See specified Test Circuit.	(0.16)0.28			μs
Fall Time	t_f	"	(0.33)0.50			μs
Storage Time	t_{stg}	"	(1.45)3.60			μs

* : The 2SB633/2SD613 are classified by 1A h_{FE} as follows.

40	C	80	60	D	120	100	E	200	160	F	320
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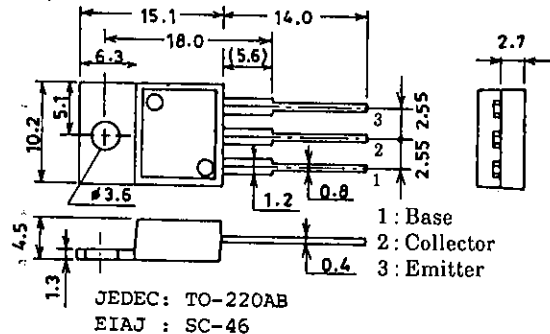
Switching Time Test Circuit

(For PNP, the polarity is reversed.)



Package Dimensions 2010C

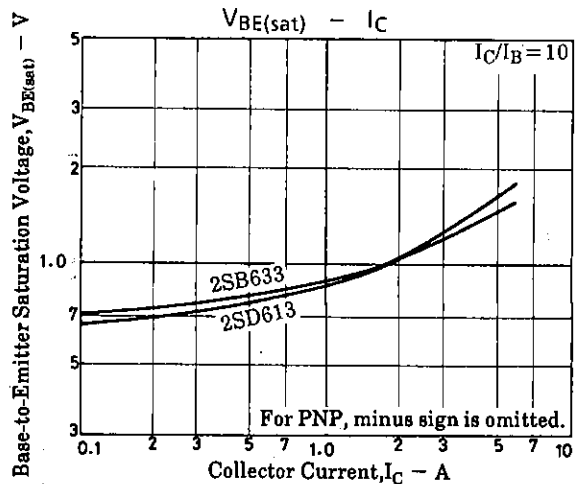
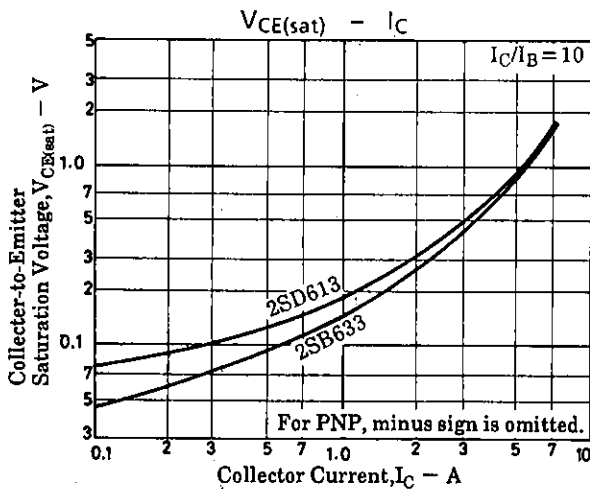
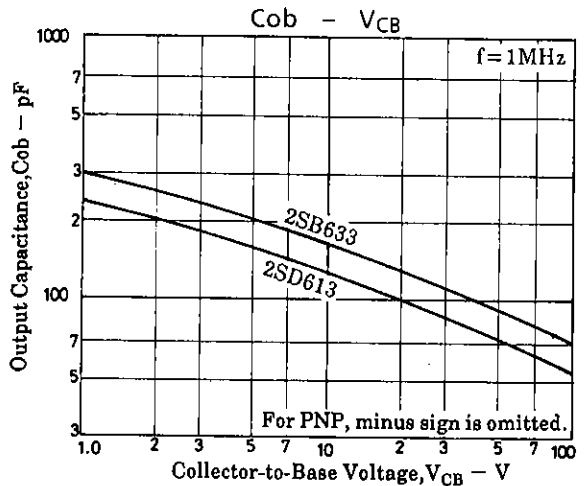
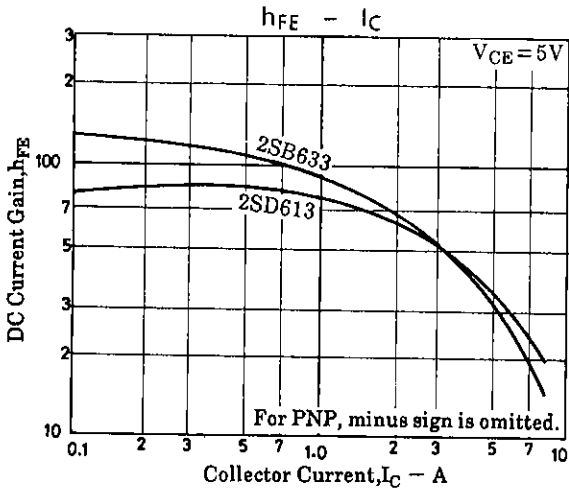
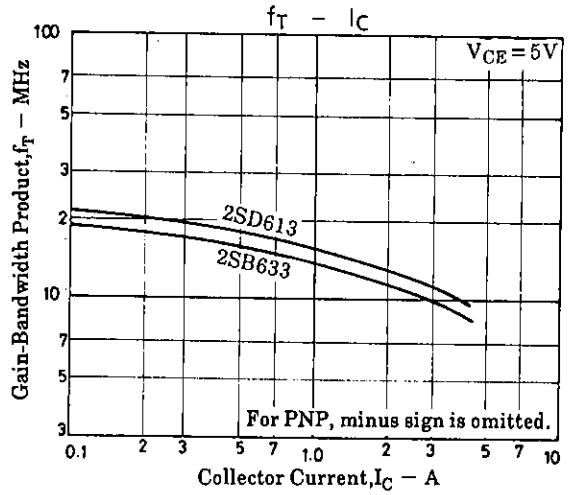
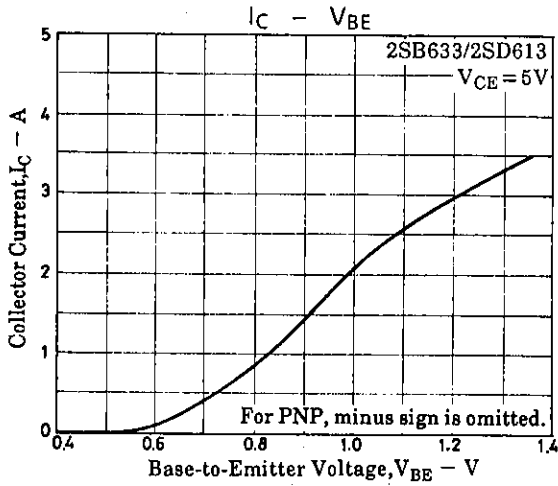
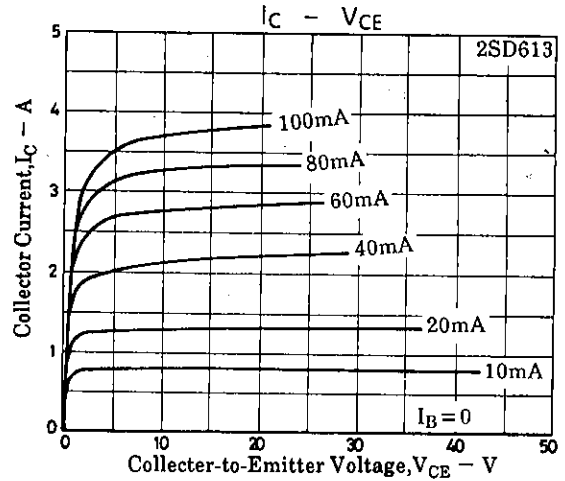
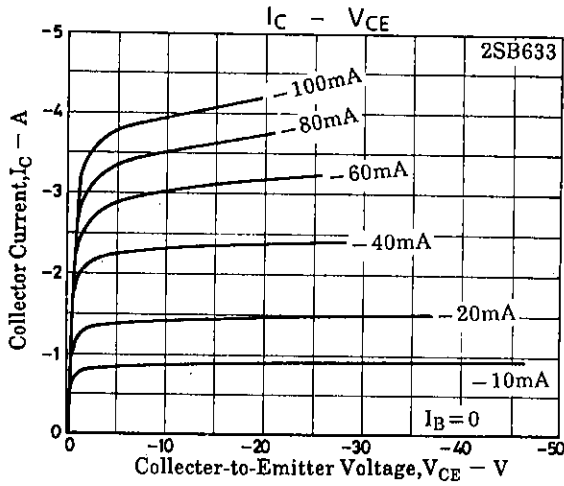
(unit : mm)



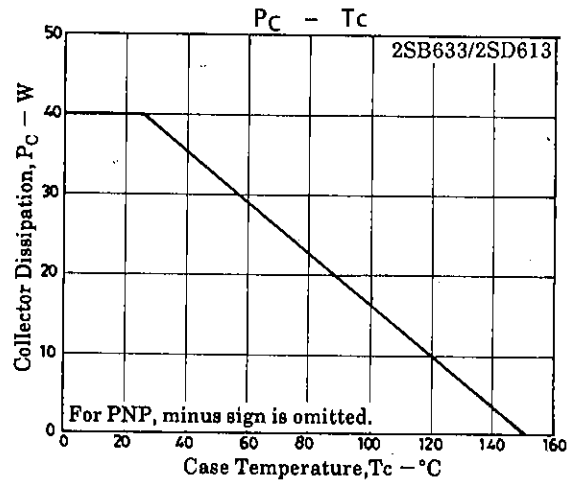
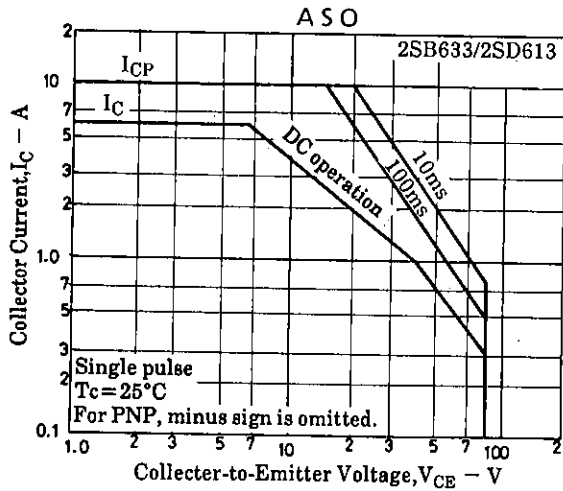
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2SB633/2SD613



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