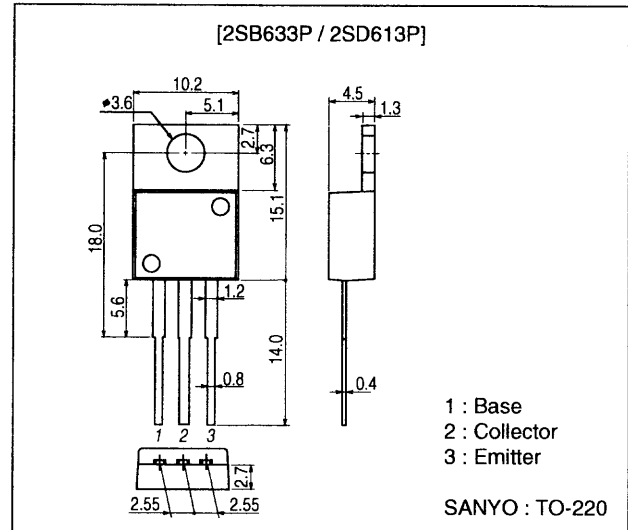


SANYO**2SB633P / 2SD613P****85V / 6A, AF 35 to 45W Output Applications****Features**

- High breakdown voltage, V_{CEO} 85V, high current 6A.
- AF 35 to 45W output.

Package Dimensionsunit : mm
2010C**Specifications**

() : 2SB633P

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

Parameter	Symbol	Conditions	Ratings	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	$T_c=25^\circ\text{C}$	60	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}	$V_{CB}=(-)40\text{V}, I_E=0$			(-)0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4\text{V}, I_C=0$			(-)0.1	mA

Continued on next page.

■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

SANYO Electric Co., Ltd. Semiconductor Company

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

2SB633P/2SD613P

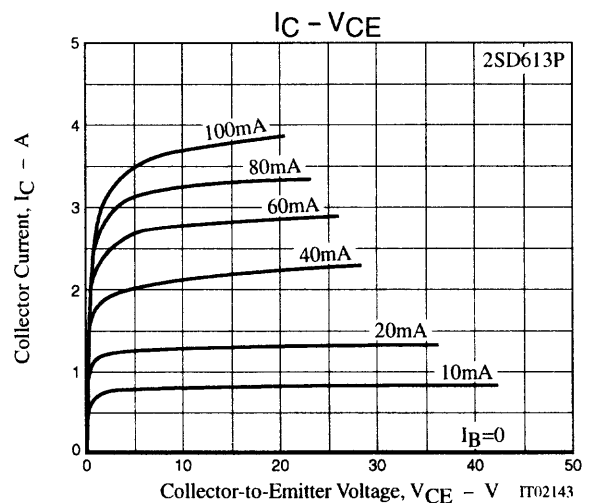
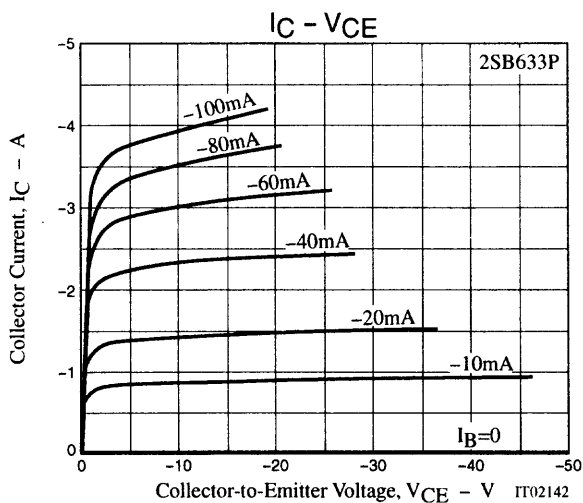
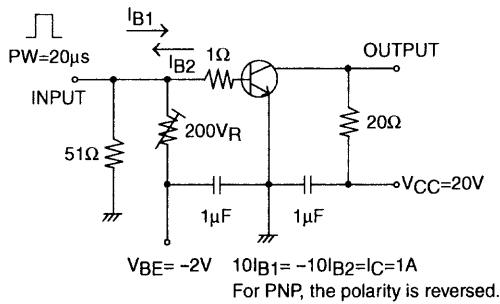
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	h_{FE1}	$V_{CE}=(-)5V, I_C=(-)1A$	40*		320*	
	h_{FE2}	$V_{CE}=(-)5V, I_C=(-)3A$	20			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)5V, I_C=(-)1A$		15		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		(150)110		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)4A, I_B=(-)0.4A$			(-)2.0	V
Base-to-Emitter Voltage	V_{BE}	$V_{CE}=(-)5V, I_C=(-)1A$			(-)1.5	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)5mA, I_E=0$	(-)100			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)5mA, R_{BE}=\infty$	(-)85			V
		$I_C=(-)50mA, R_{BE}=\infty$	(-)85			V
Emitter-to-Base 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	See specified test circuit.		(0.33)0.50		μs
Storage Time	t_{stg}	See specified test circuit.		(1.45)3.60		μs

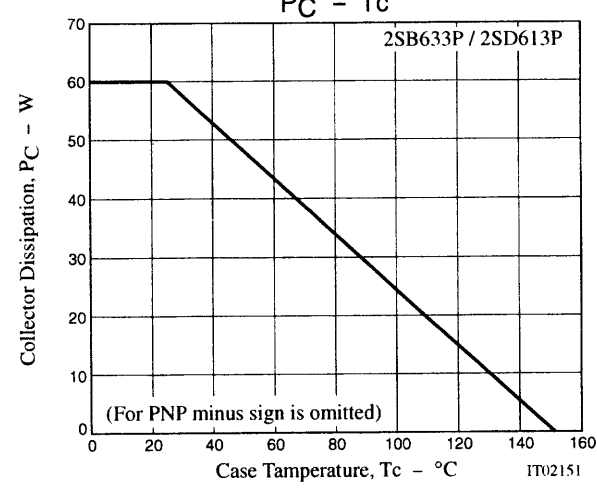
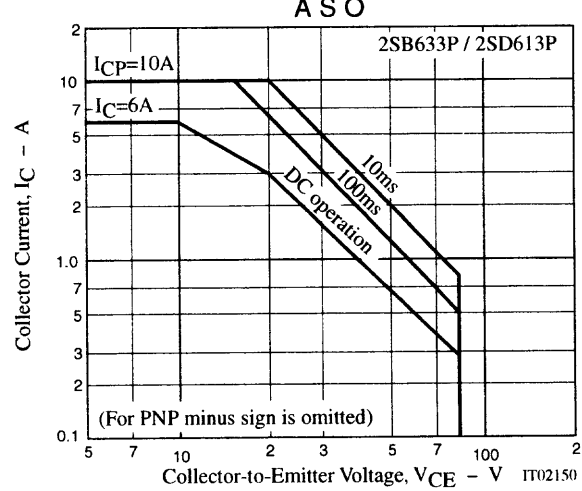
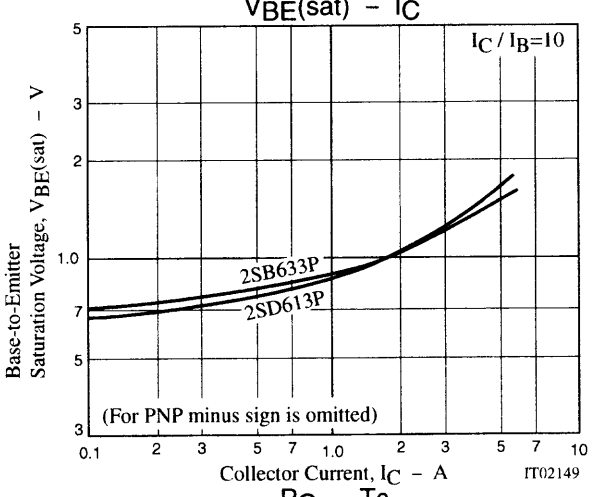
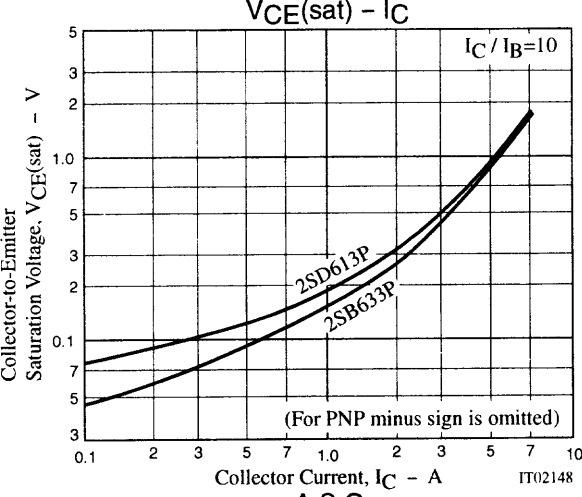
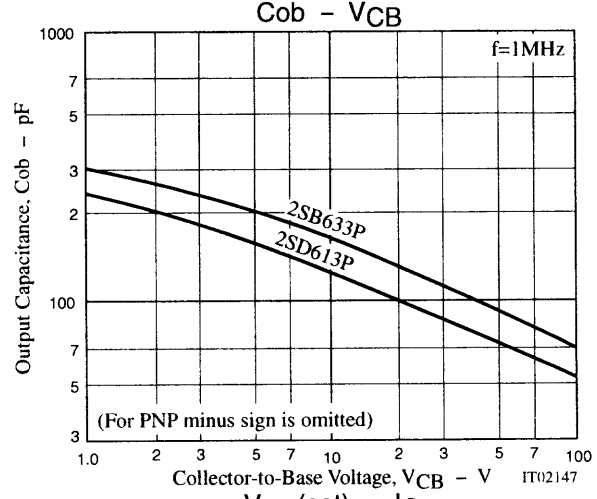
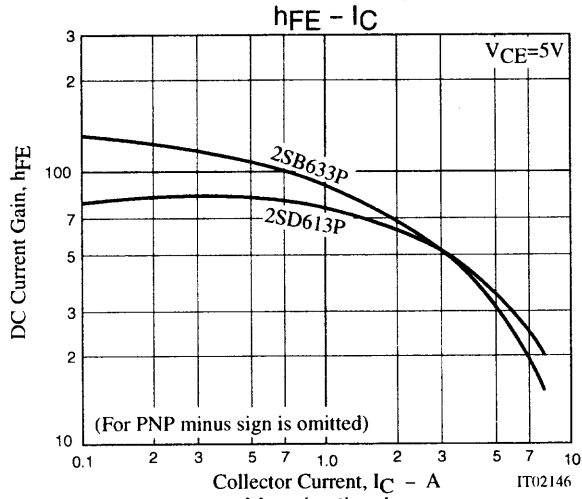
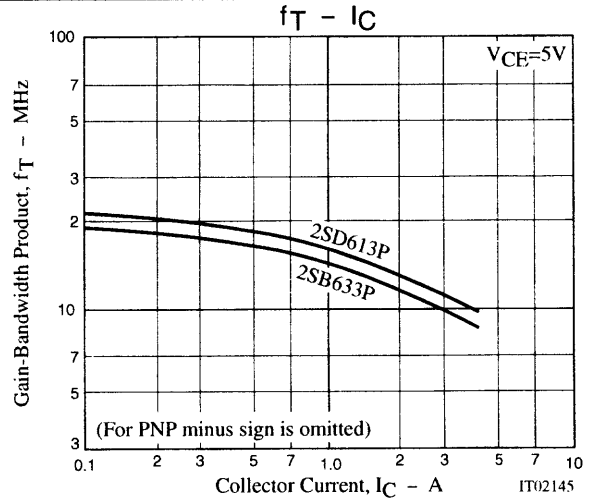
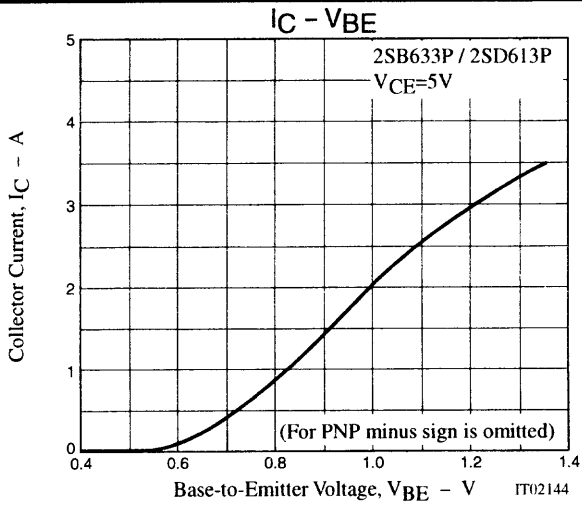
* : The 2SB633P / 2SD613P are classified by 1A h_{FE} as follows :

Rank	D	E	F
h_{FE}	60 to 120	100 to 200	160 to 320

Switching Time Test Circuit



2SB633P/2SD613P



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