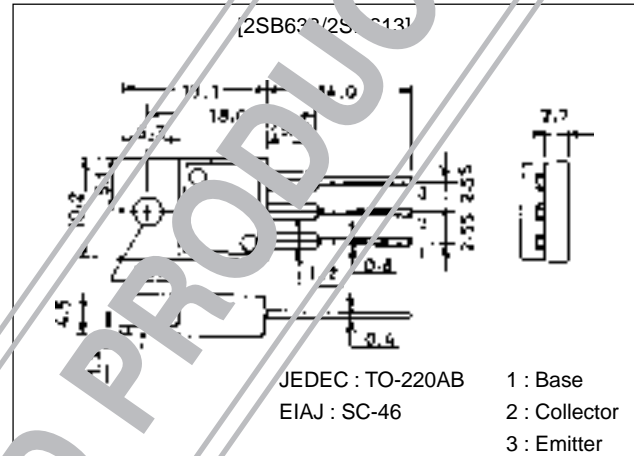


**SANYO****2SB633/2SD613****85V/6A, AF 25 to 35W Output Applications****Features**

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

**Package Dimensions**unit:mm  
2010C

() : 2SB633

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

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	$P_C$	$T_c=25^\circ C$	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	$h_{FE1}$	$V_{CE}=(-)5V, I_C=(-)1A$	40*		320*	
	$h_{FE2}$	$V_{CE}=(-)5V, I_C=(-)3A$	20			
Gain-Bandwidth Product	$f_T$	$V_{CE}=(-)5V, I_C=(-)1A$		15		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)4A, I_B=(-)0.4A$			(-2.0)	V
Base-to-Emitter Voltage	$V_{BE}$	$I_E=(-)5A, I_C=(-)1A$			(-1.5)	V
Output Capacitance	$C_{ob}$	$V_{CB}=(-)10V, f=1MHz$		(150)		pF
				110		pF

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■ 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 Business Headquarters**

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

91098HA (KT)/90595MO (KOTO)/D251MH/4017KI/1115MW, TS/No.174, 8-2629 No.513-1/4

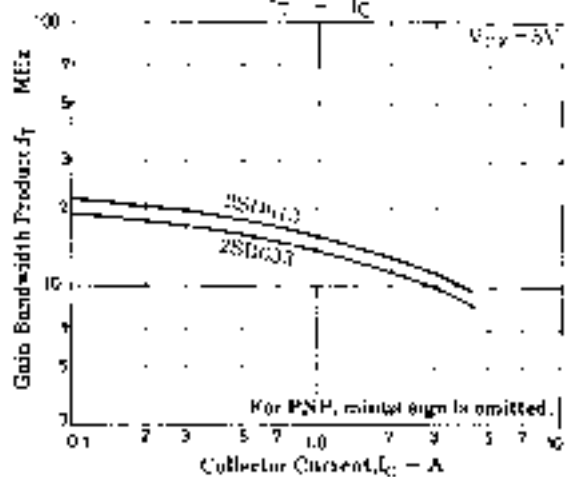
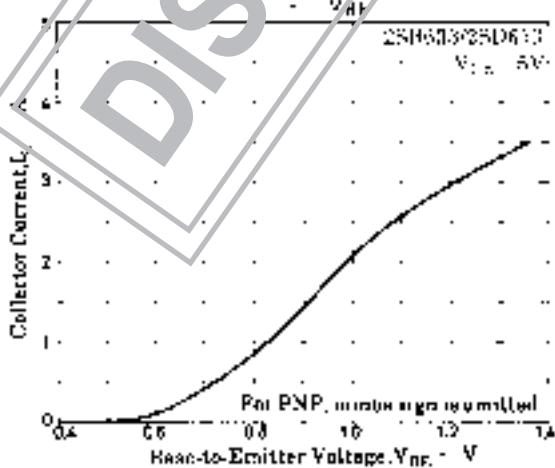
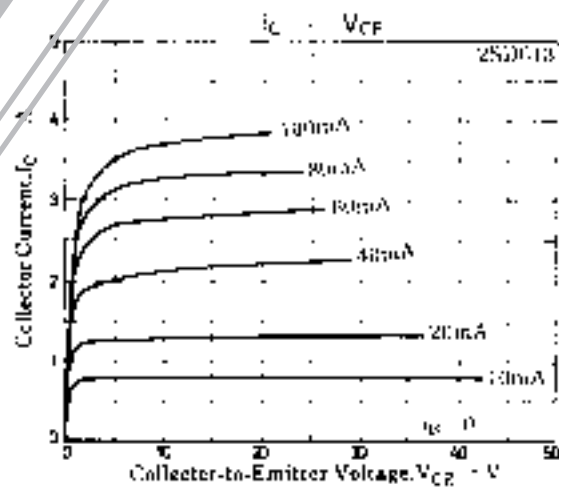
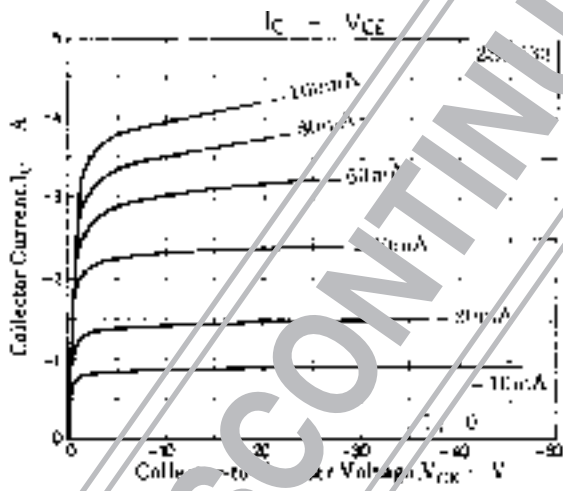
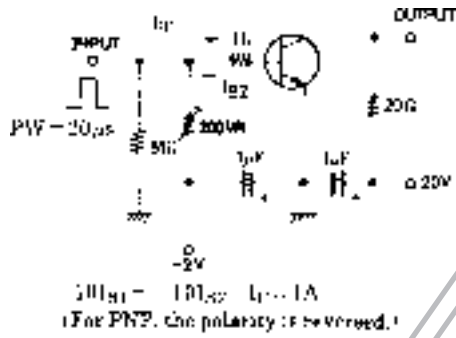
## 2SB633/2SD613

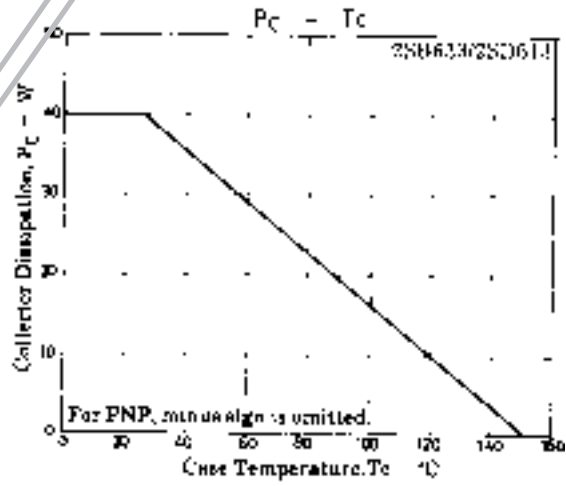
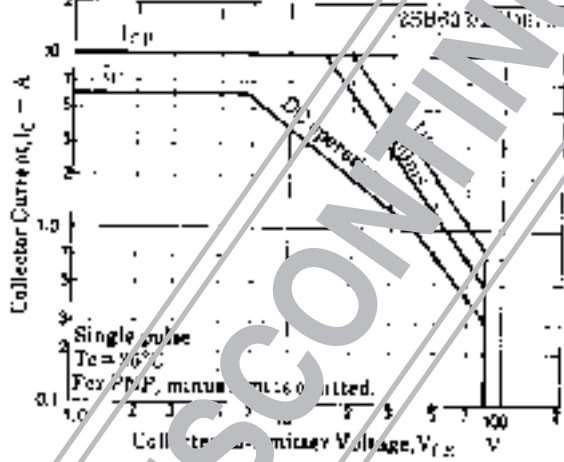
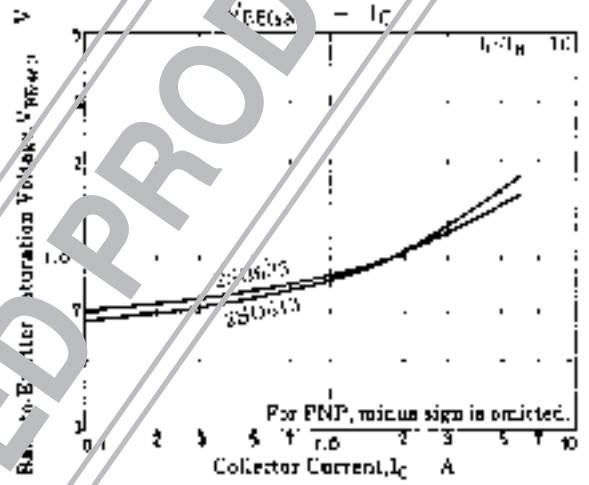
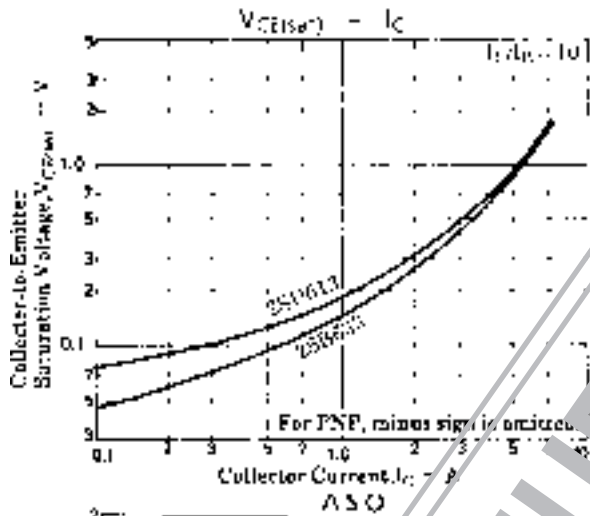
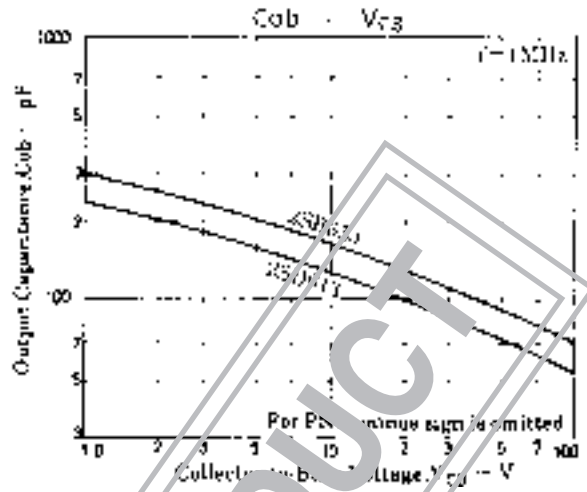
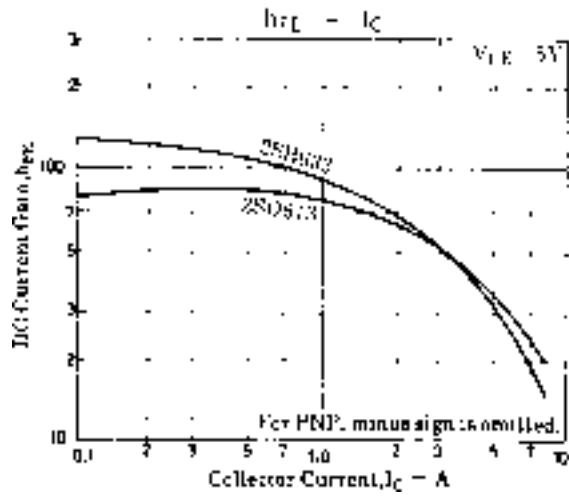
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)5mA, I_E = 0$	(-)100			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)5mA, R_{BE} = \infty$	(-)85			V
	$V_{(BR)CEO}$	$I_C = (-)50mA, R_{BE} = \infty$	(-)85			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)5mA, I_C = 0$	(-)6			V
Turn-ON Time	$t_{on}$	See specified Test Circuit		(0.16)		$\mu s$
Fall Time	$t_f$	See specified Test Circuit		0.28		$\mu s$
				(0.33)		$\mu s$
Storage Time	$t_{stg}$	See specified Test Circuit		0.50		$\mu s$
				(15)		$\mu s$
				3.60		$\mu s$

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

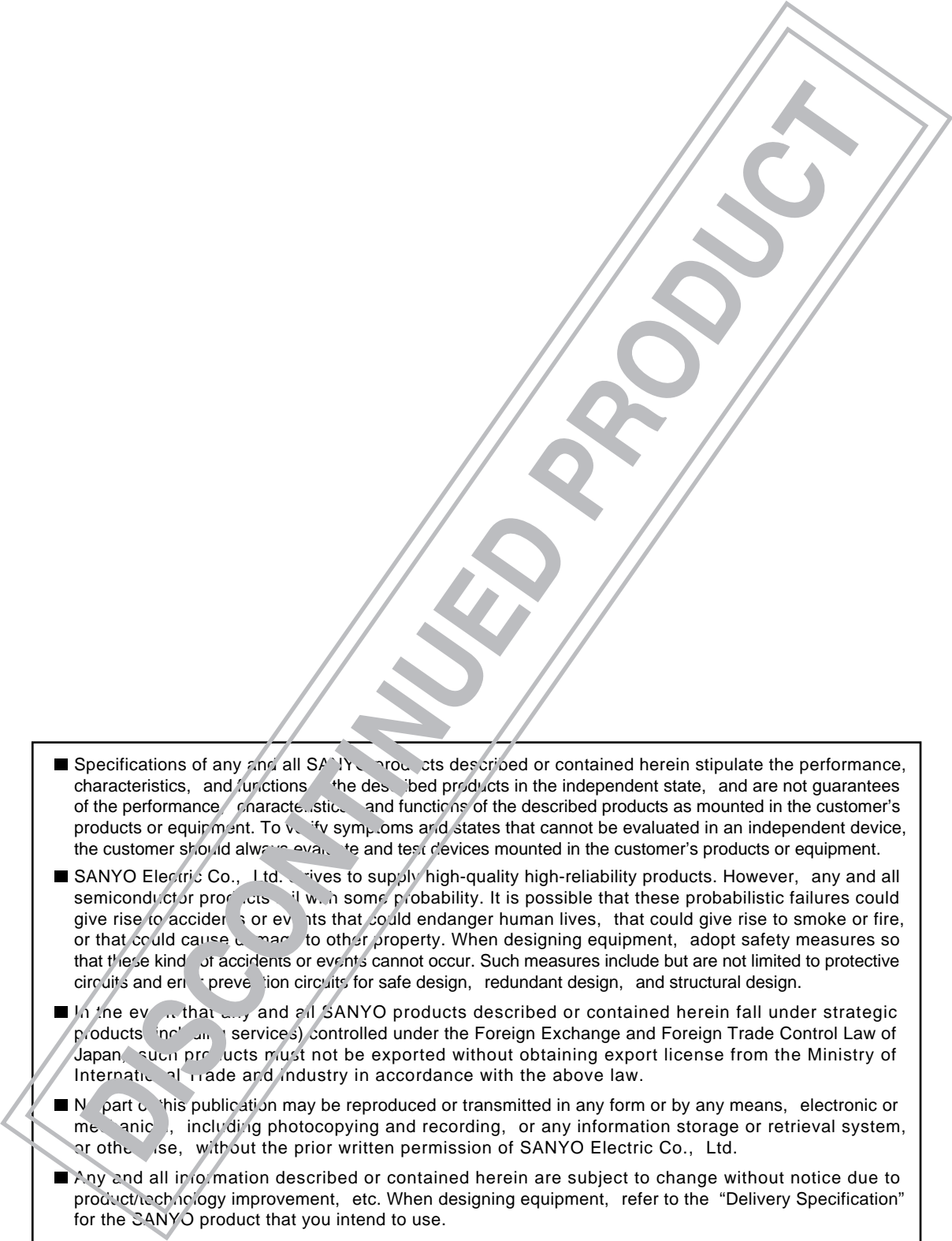
40	C	80	60	D	120	100	E	200	160	F	320
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### Switching Time Test Circuit





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