



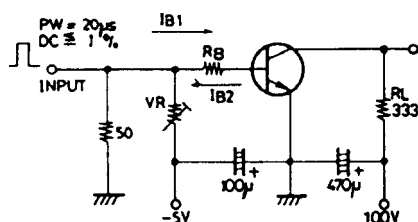
2SA1319/2SC3332

High-Voltage Switching Applications

Features

- High breakdown voltage.
- Excellent h_{FE} linearity.
- Wide ASO and highly resistant to breakdown.
- Adoption of MBIT process.

Switching Test Circuit



$20I_{B1} = -20I_{B2} = I_C = 300\text{mA}$
(For PNP, the polarity is reversed)
Unit (resistance : Ω , capacitance : F)

() : 2SA1319

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(–)180	V
Collector-to-Emitter Voltage	V_{CEO}		(–)160	V
Emitter-to-Base Voltage	V_{EBO}		(–)6	V
Collector Current	I_C		(–)0.7	A
Collector Current (Pulse)	I_{CP}		(–)1.5	A
Collector Dissipation	P_C		700	mW
Junction Temperature	T_J		150	°C
Storage Temperature	T_{stg}		–55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)120V, I_E=0$			$(-)0.1$	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4V, I_C=0$			$(-)0.1$	μA
DC Current Gain	h_{FE1}	$V_{CE}=(-)5V, I_C=(-)100mA$	100*		400*	
	h_{FE2}	$V_{CE}=(-)5V, I_C=(-)10mA$	80			
Gain Bandwidth Product	f_T	$V_{CE}=(-)10V, I_C=(-)50mA$		120		MHz
Common Base Output Capacitance	C_{ob}	$V_{CB}=(-)10V$		(11)8		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)250mA, I_B=(-)25mA$		(0.20) 0.12	(0.5) 0.4	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)250mA, I_B=(-)25mA$		$(-)0.85$	$(-)1.2$	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	$(-)180$			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	$(-)160$			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0$	$(-)6$			V
Turn-ON Time	t_{on}	See specified Test Circuit		(60)50		ns
Storage Time	t_{stg}	See specified Test Circuit		(900) 1000		ns
Fall Time	t_f	See specified Test Circuit		(60)60		ns

* : The 2SA1319/2SC3332 are classified by 100mA h_{FE} as follows :

100	R	200	140	S	280	200	T	400
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SANYO Electric Co.,Ltd. Semiconductor Business Headquarters

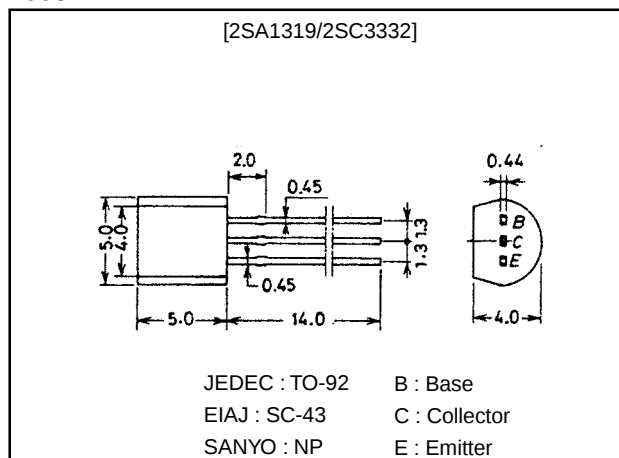
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

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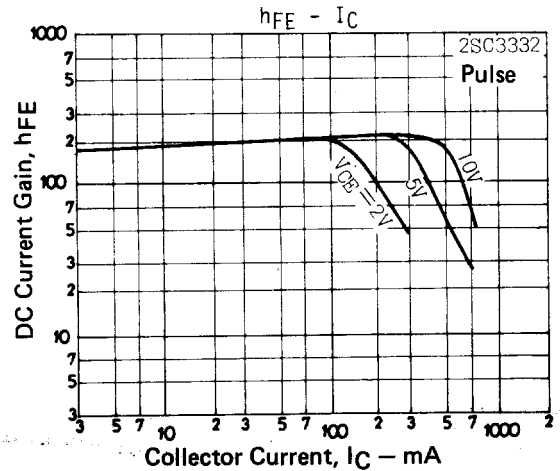
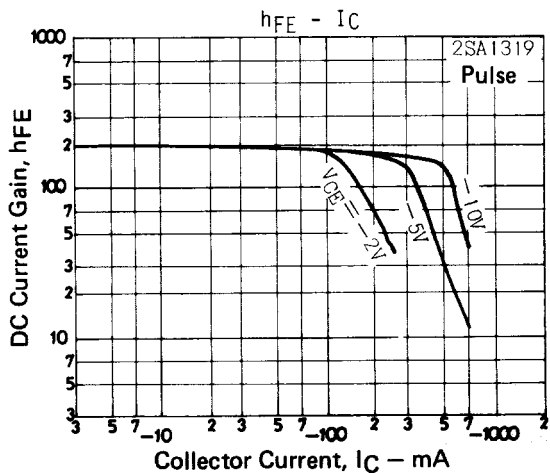
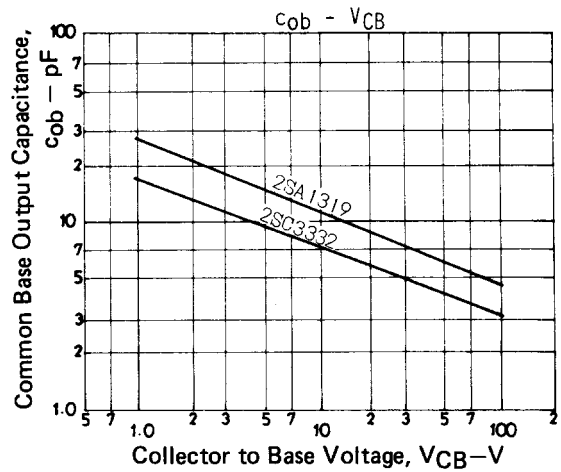
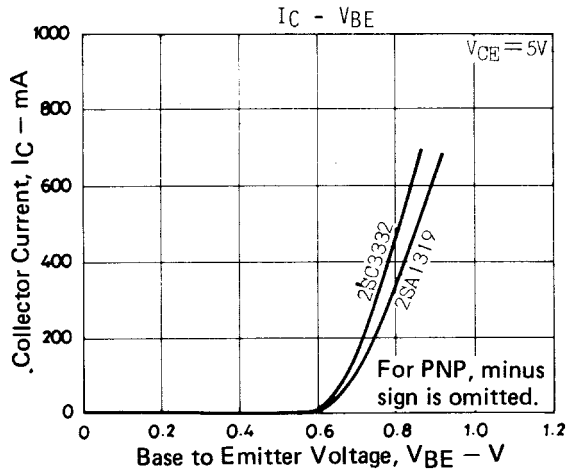
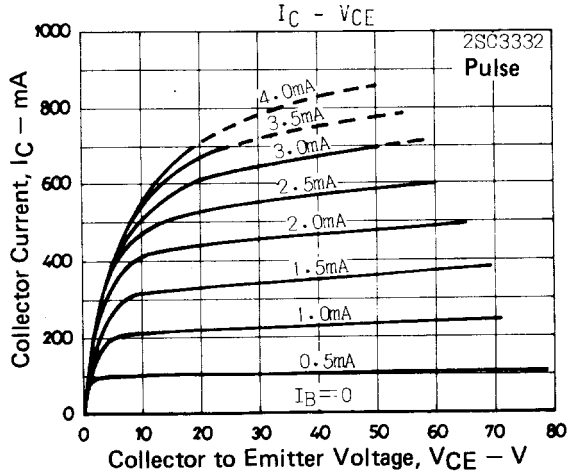
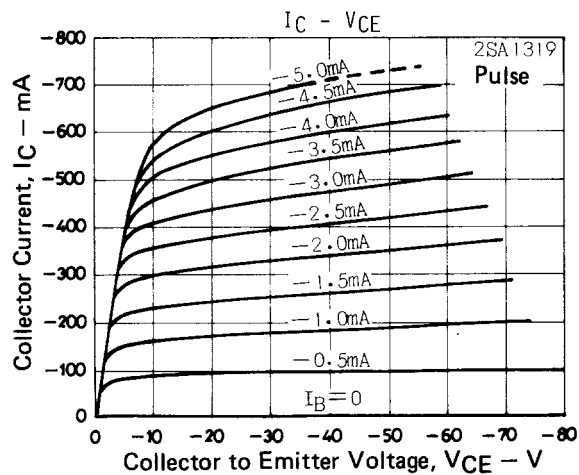
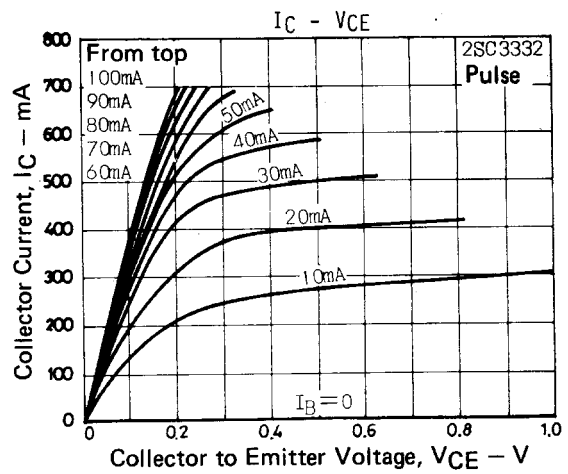
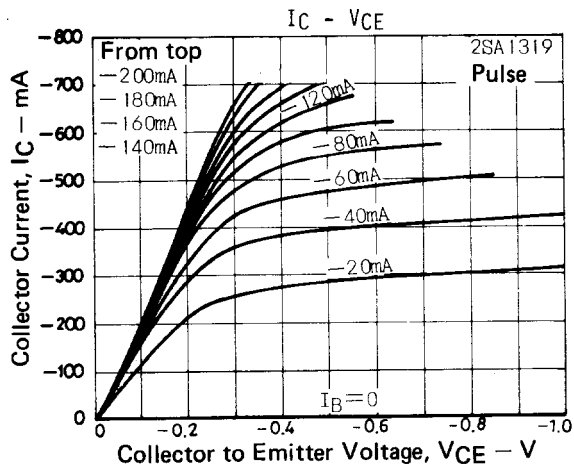
Package Dimensions

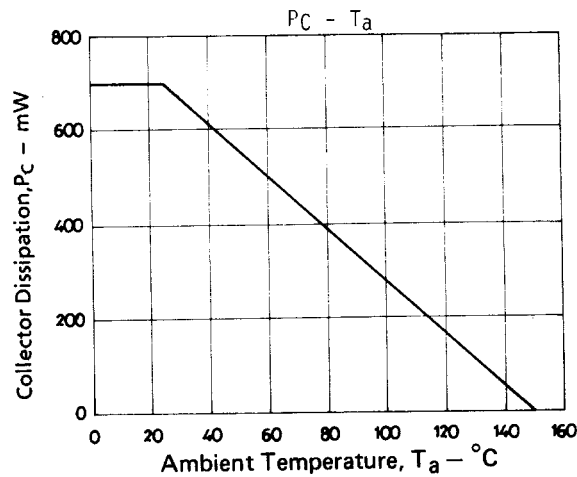
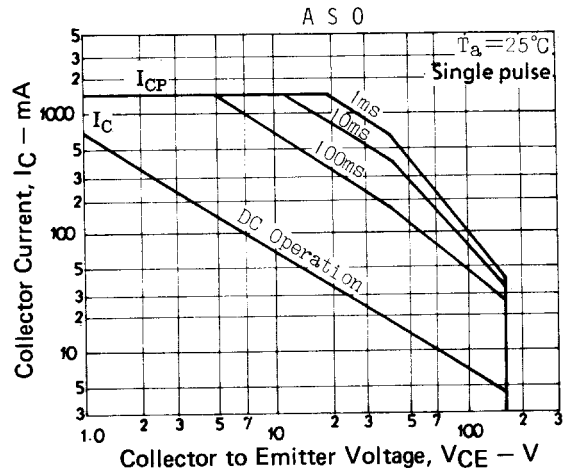
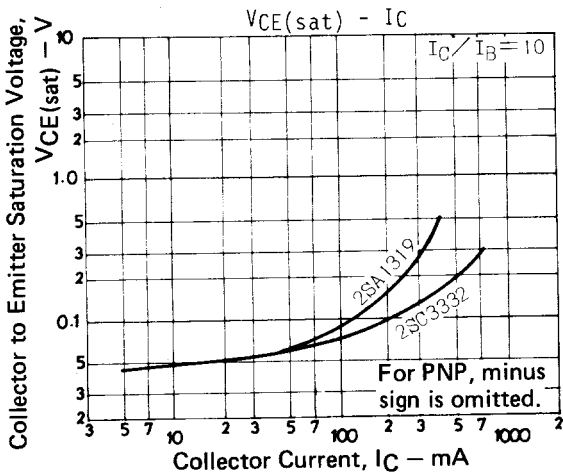
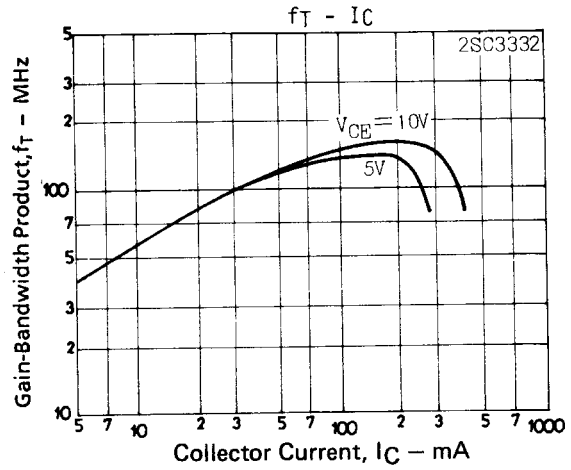
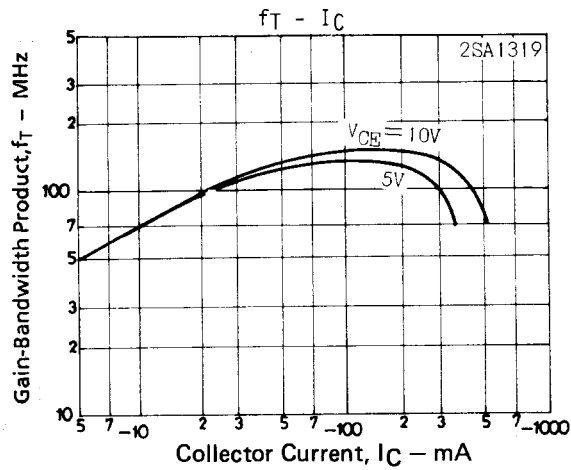
unit:mm

2003A



2SA1319/2SC3332





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