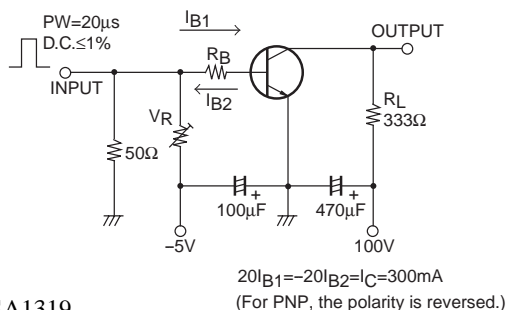


SANYO**2SA1319/2SC3332****High-Voltage Switching Applications**

An ON Semiconductor Company

Features

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

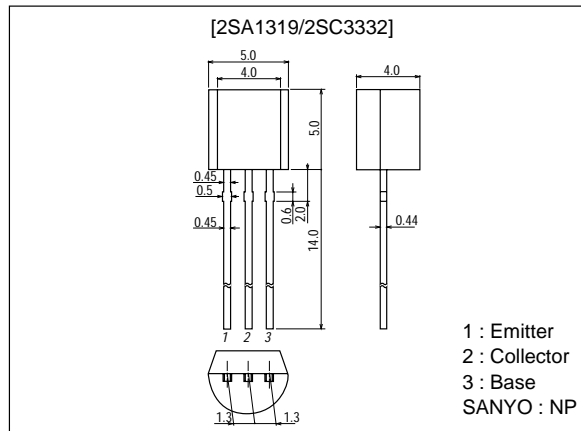
Switching Test Circuit

(): 2SA1319

Package Dimensions

unit:mm

2003B

**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	$^\circ\text{C}$
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}	$V_{CB}=(-)120\text{V}$, $I_E=0$			(-)-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4\text{V}$, $I_C=0$			(-)-0.1	μA
DC Current Gain	h_{FE1}	$V_{CE}=(-)5\text{V}$, $I_C=(-)100\text{mA}$	100*		400*	
	h_{FE2}	$V_{CE}=(-)5\text{V}$, $I_C=(-)10\text{mA}$	80			

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

Continued on next page.

Rank	R	S	T
h_{FE}	100 to 200	140 to 280	200 to 400

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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.

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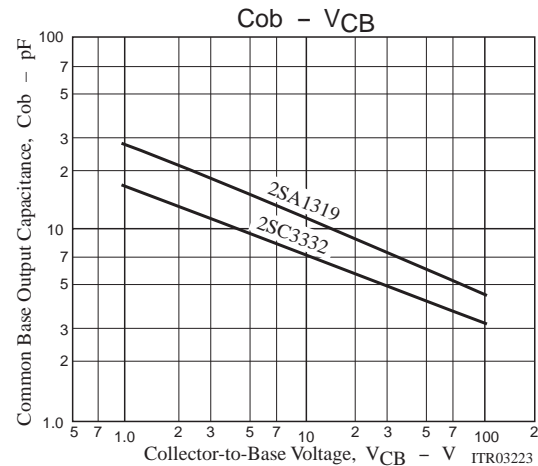
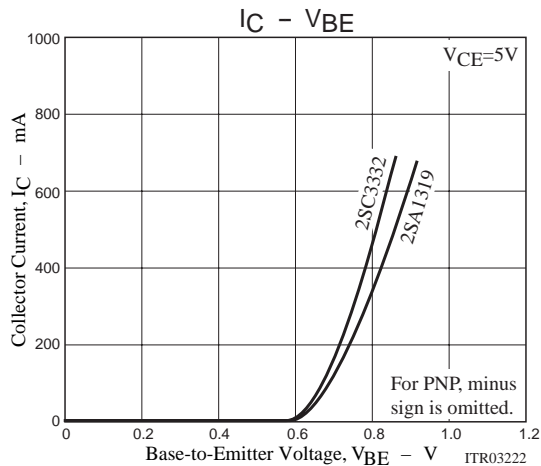
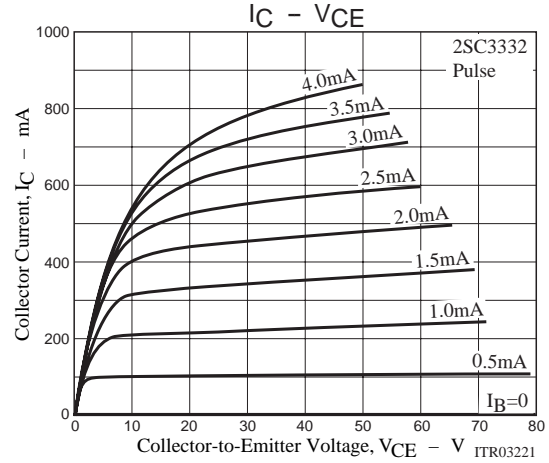
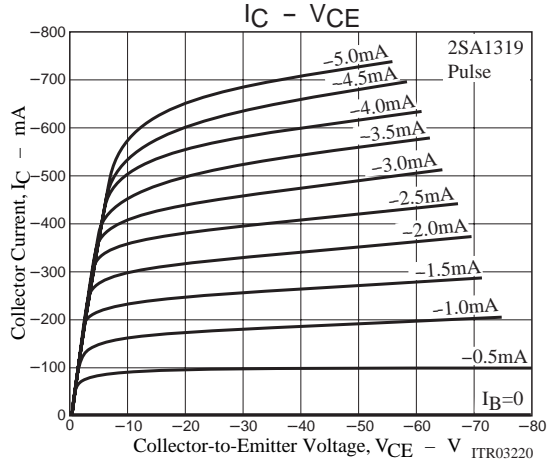
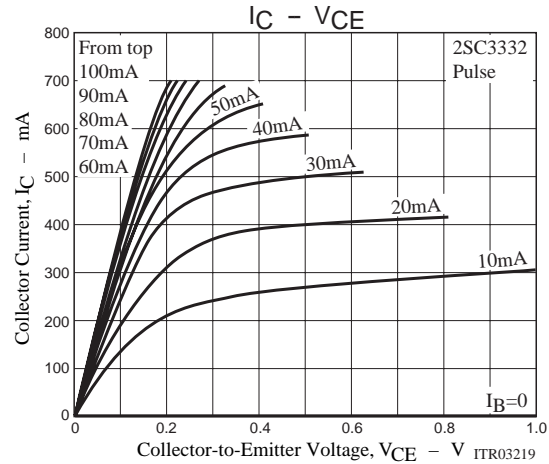
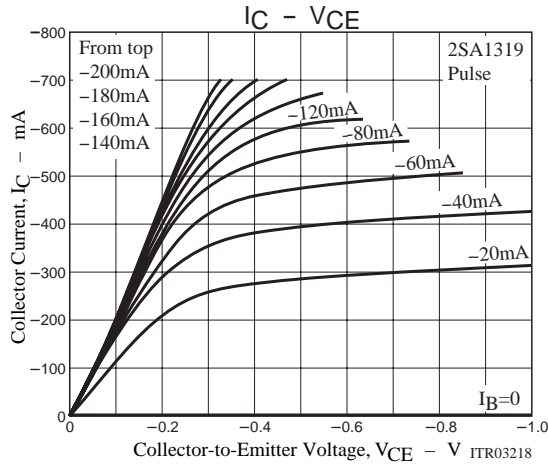
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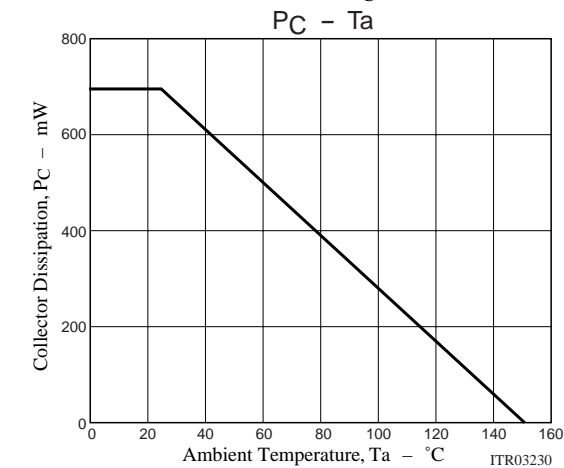
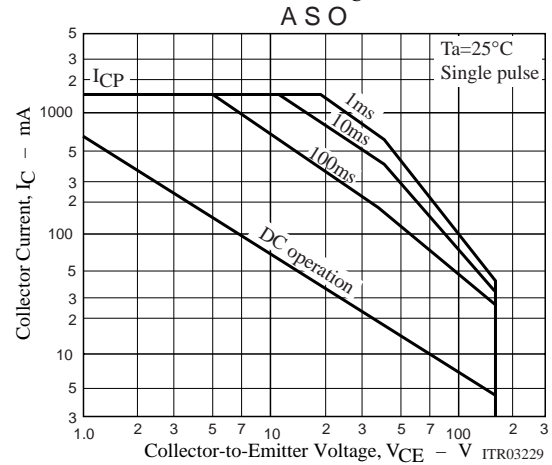
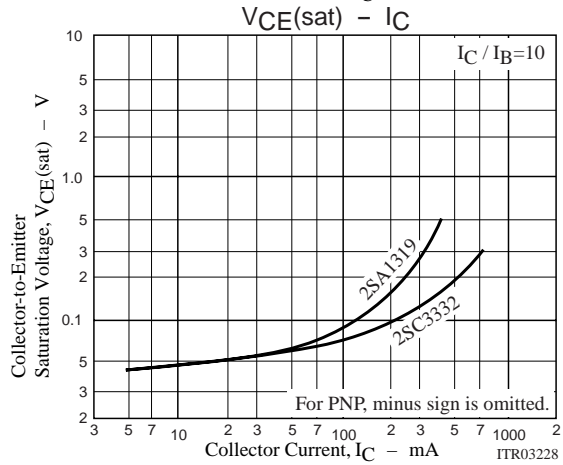
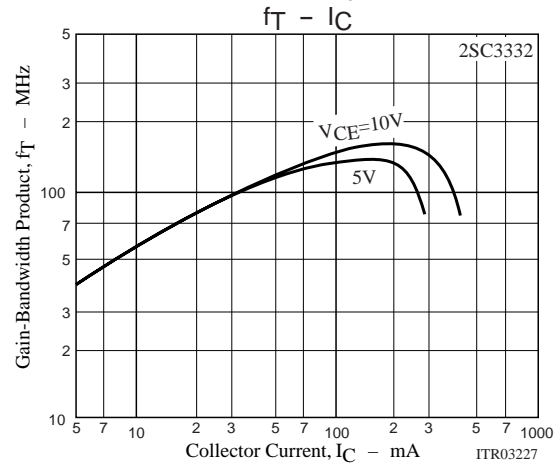
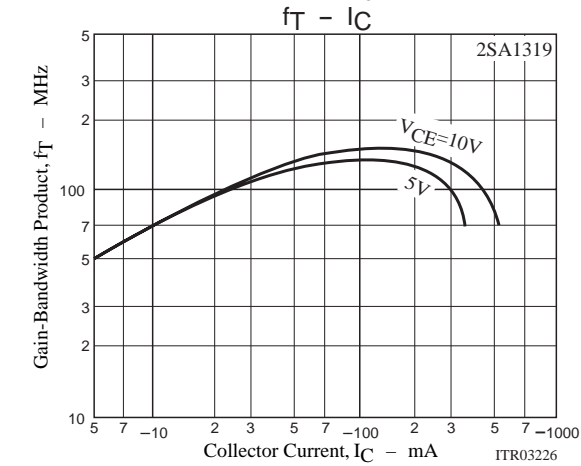
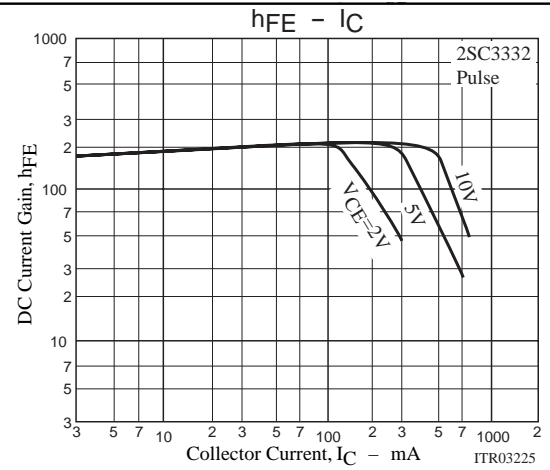
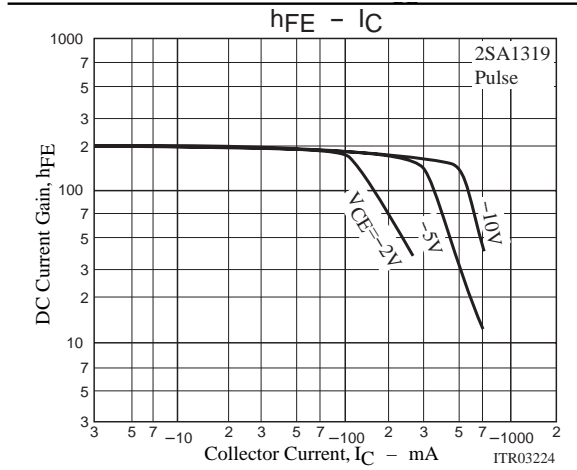
2SA1319/2SC3332

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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
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



2SA1319/2SC3332



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