

SANYO	No.3149	<h1 style="margin: 0;">2SB1449/2SD2198</h1> <p style="margin: 0;">PNP/NPN Epitaxial Planar Silicon Transistors</p> <p style="margin: 0;">50V/5A Switching Applications</p>
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Features

- Surface mount type device making the following possible
- Reduction in the number of manufacturing processes for 2SB1449/2SD2198-applied equipment
- High density surface mount applications
- Small size of 2SB1449/2SD2198-applied equipment
- Low collector-to-emitter saturation voltage

() : 2SB1449

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector-to-Base Voltage	V_{CBO}	(-)60	V
Collector-to-Emitter Voltage	V_{CEO}	(-)50	V
Emitter-to-Base Voltage	V_{EBO}	(-)6	V
Collector Current	I_C	(-)5	A
Collector Current(Pulse)	I_{CP}	(-)9	A
Collector Dissipation	P_C	1.65	W
		30	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

$T_c = 25^\circ\text{C}$

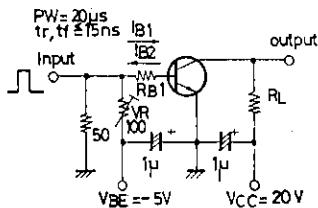
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
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
DC Current Gain	$h_{FE(1)}$	$V_{CE} = (-)2\text{V}, I_C = (-)1\text{A}$	70*		280*	
	$h_{FE(2)}$	$V_{CE} = (-)2\text{V}, I_C = (-)3\text{A}$	30			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)5\text{V}, I_C = (-)1\text{A}$		30		MHz
Output Capacitance	c_{ob}	$V_{CB} = (-)10\text{V}, f = 1\text{MHz}$		100		pF
				(160)		
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)3\text{A}, I_B = (-)0.3\text{A}$			(-)0.4	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)1\text{mA}, I_E = 0$	(-)60			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1\text{mA}, R_{BE} = \infty$	(-)50			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)1\text{mA}, I_C = 0$	(-)6			V
Turn-ON Time	t_{on}	See specified Test Circuit.		0.1		µs
Storage Time	t_{stg}	"	(0.7)	1.4		µs
Fall Time	t_f	"		0.2		µs

* : The 2SB1449/2SD2198 are classified by 1A h_{FE} as follows:

70	Q	140	100	R	200	140	S	280
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Switching Time Test Circuit



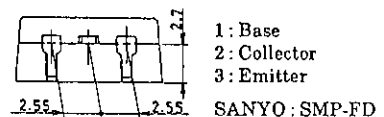
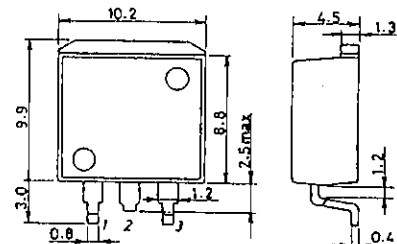
10 $I_{B1} = -10 I_{B2} = I_C = 2\text{A}$

For PNP, the polarity is reversed.

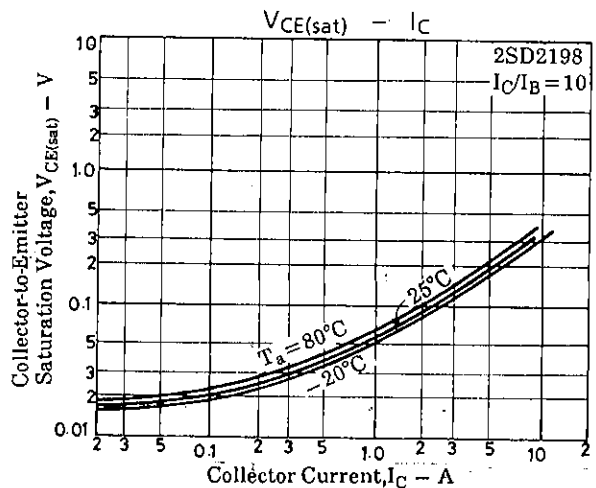
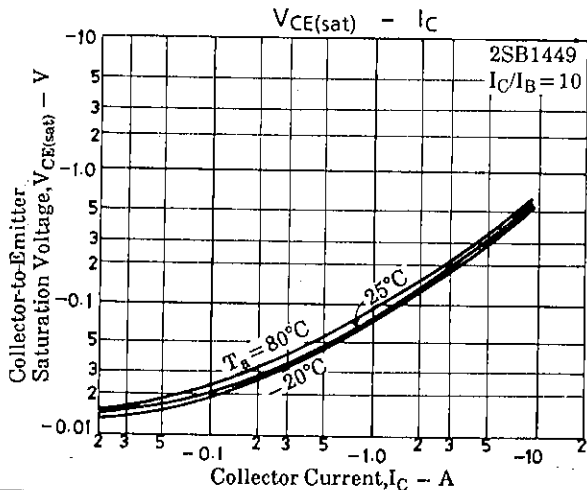
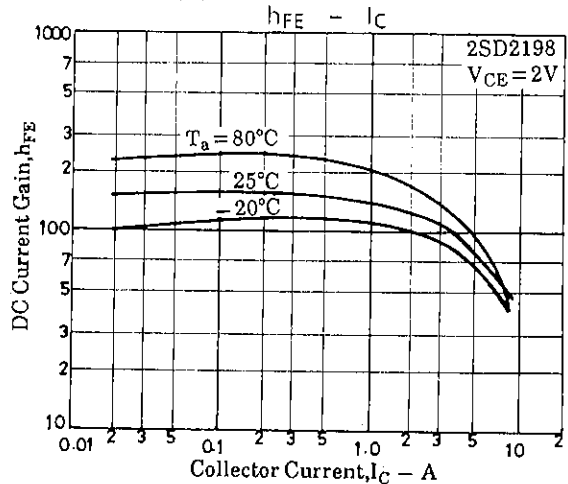
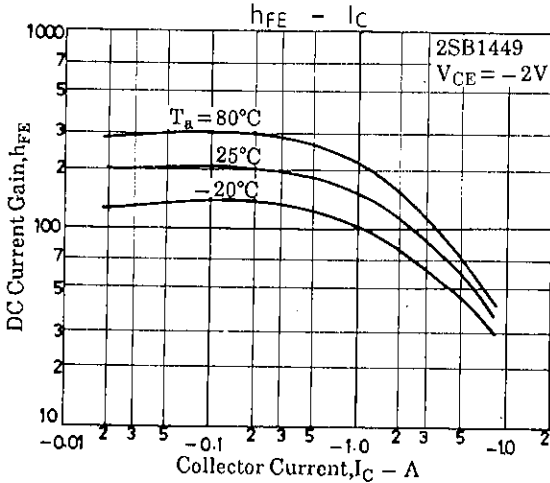
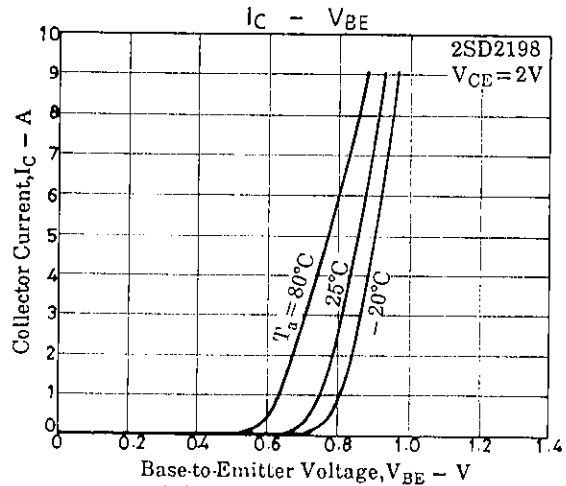
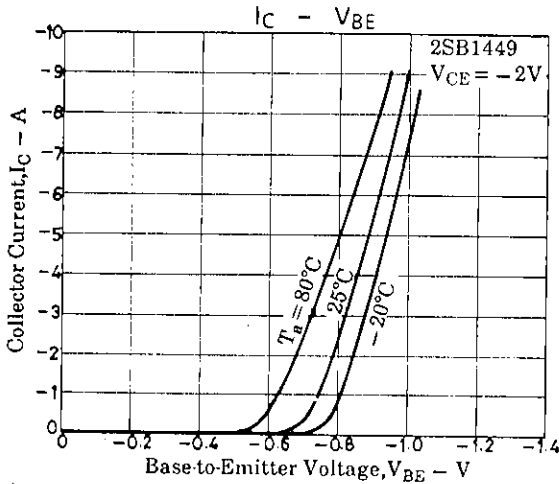
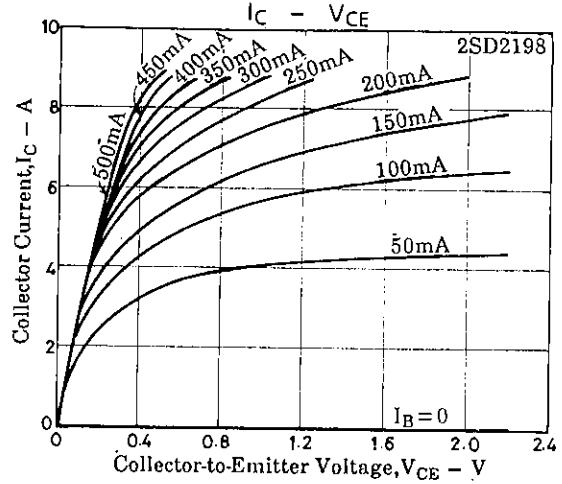
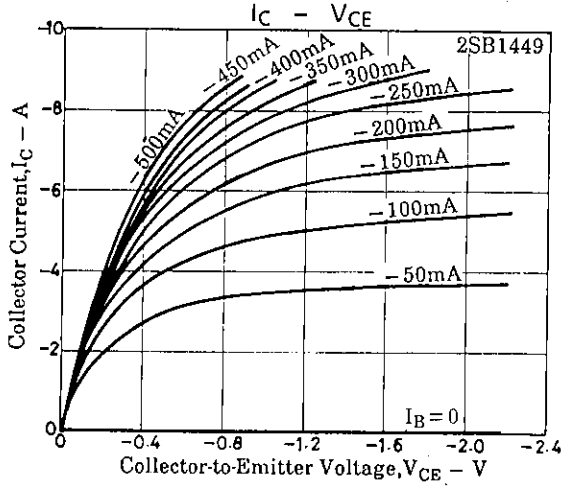
Unit (Resistance : Ω, Capacitance : F)

Package Dimensions 2069B

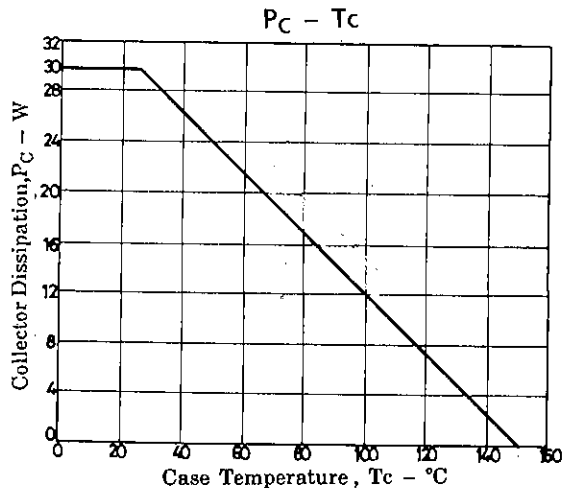
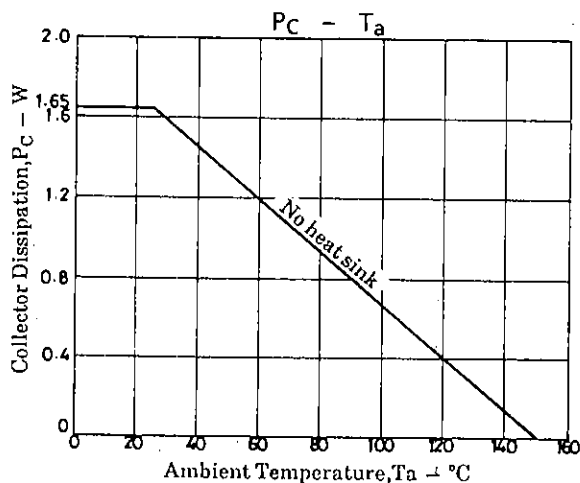
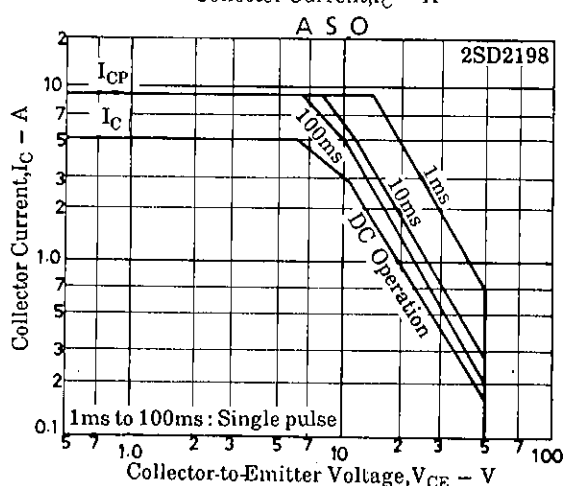
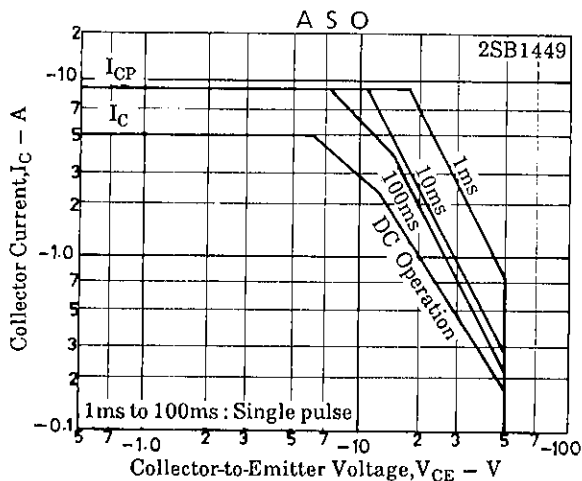
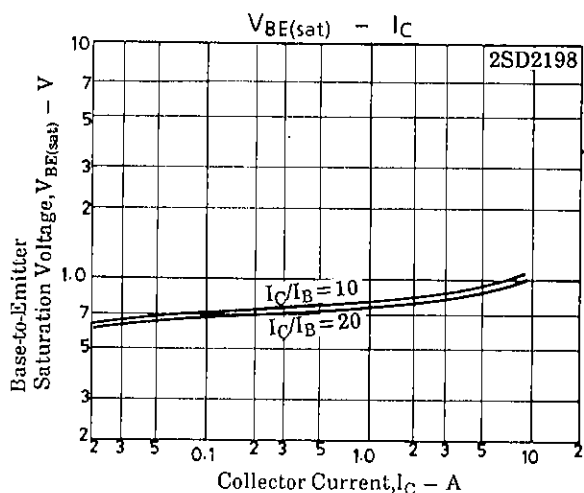
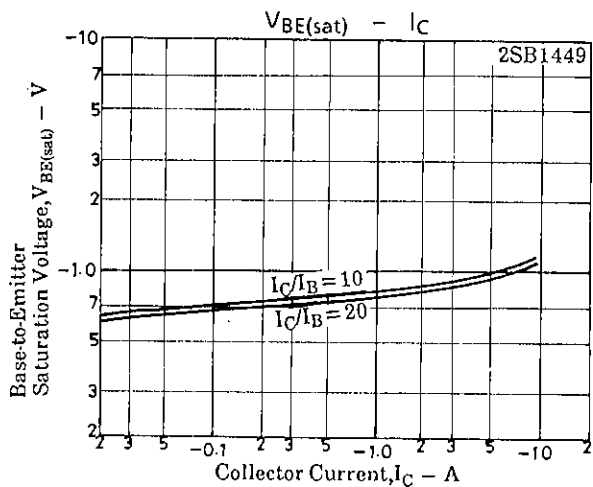
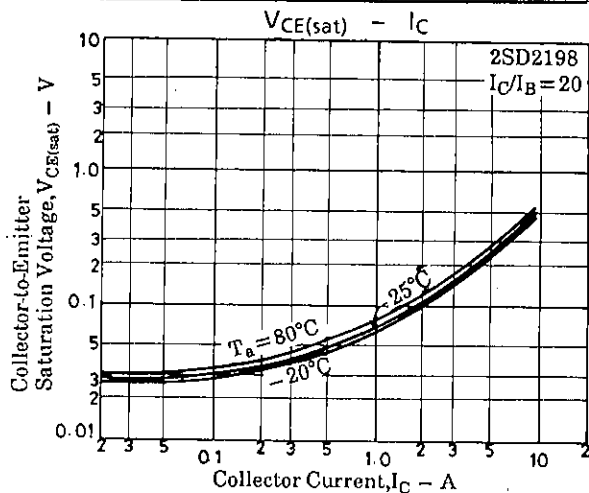
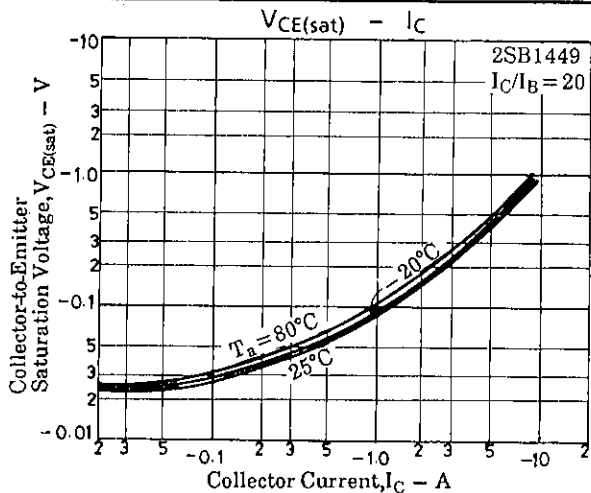
(unit : mm)



2SB1449/2SD2198



2SB1449/2SD2198



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