

**SANYO**

No.1784B

**2SB1118/2SD1618**

PNP/NPN Epitaxial Planar Silicon Transistors

Low-Voltage, High-Current Amp,  
Muting Applications**Features**

- Low collector-to-emitter saturation voltage.
- Very small size making it easy to provide high-density, small-sized hybrid IC's

( ): 2SB1118

**Absolute Maximum Ratings at Ta=25°C**

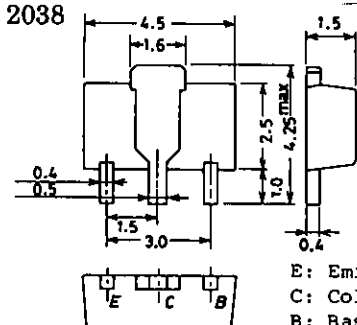
			unit
Collector to Base Voltage	$V_{CBO}$	(-)20	V
Collector to Emitter Voltage	$V_{CEO}$	(-)15	V
Emitter to Base Voltage	$V_{EBO}$	(-)5	V
Collector Current	$I_C$	(-)0.7	A
Collector Current(Pulse)	$I_{CP}$	(-)1.5	A
Collector Dissipation	$P_C$	500	mW
	$P_C$ Mounted on ceramic board (250mm <sup>2</sup> x 0.8mm)	1.3	W
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55 to +150	°C

**Electrical Characteristics at Ta=25°C**

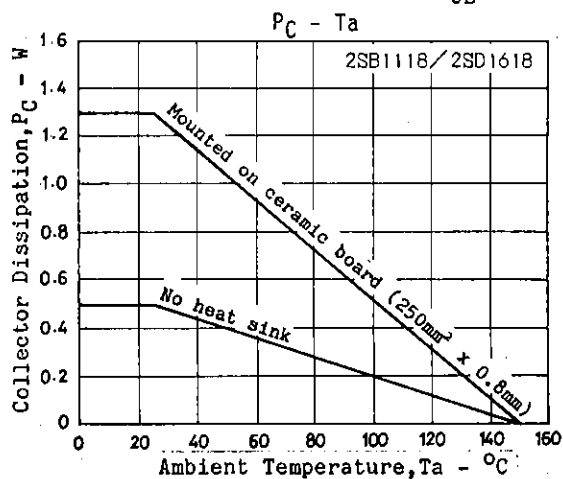
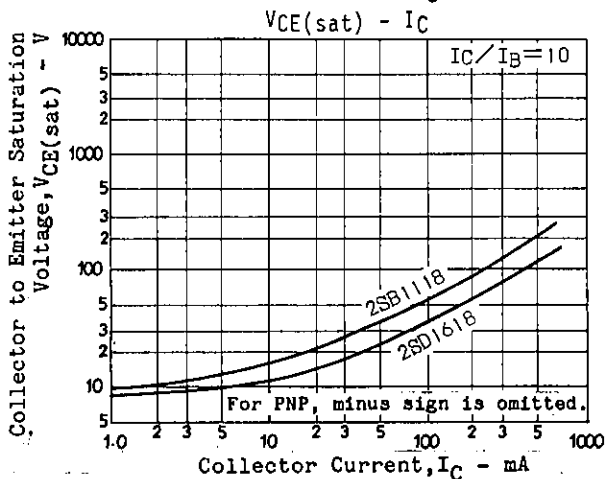
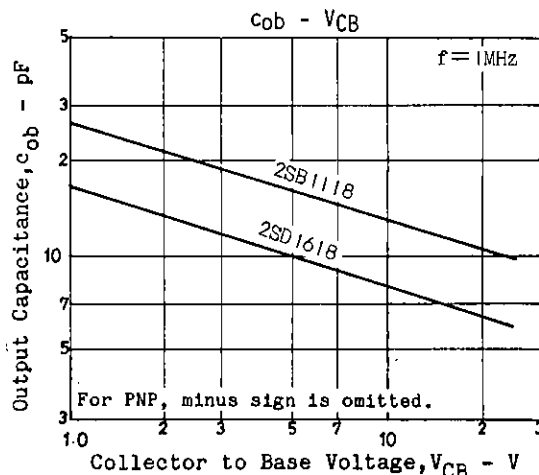
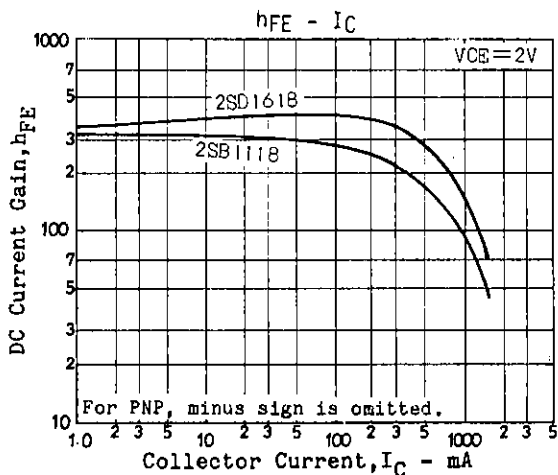
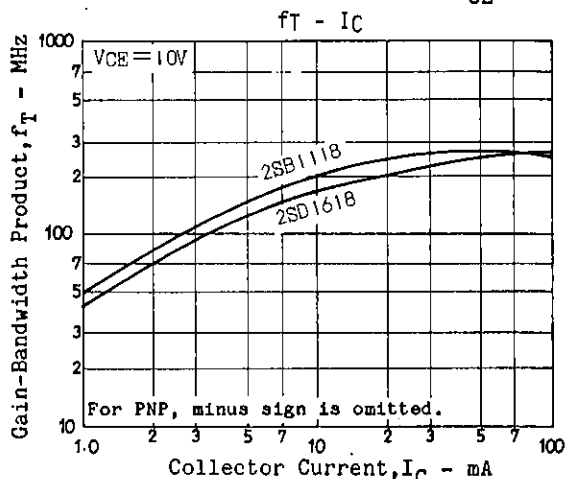
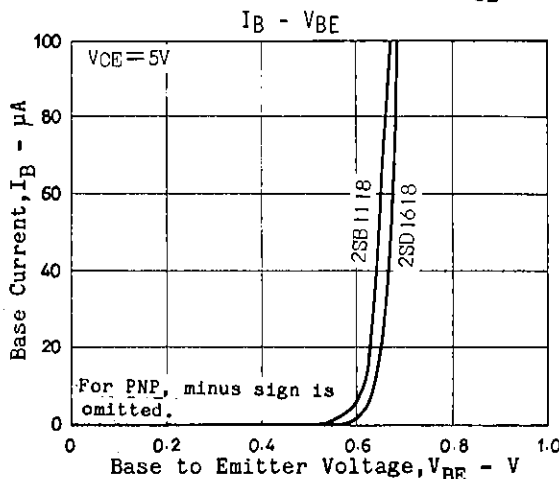
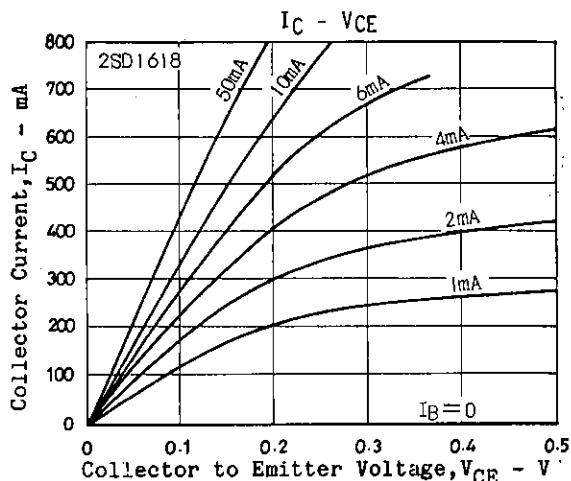
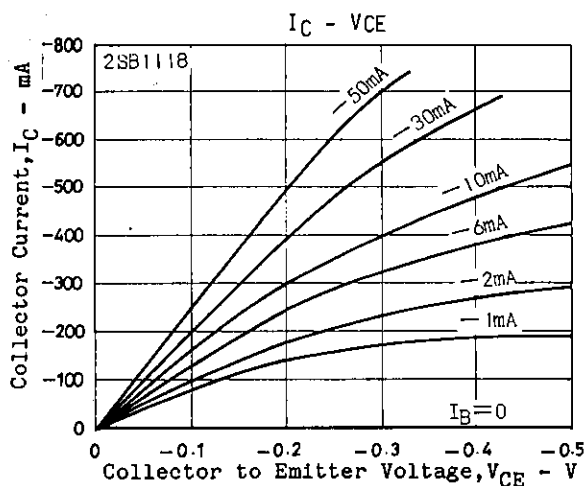
			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=(-)15V, I_C=0$			(-)0.1	μA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=(-)4V, I_C=0$			(-)0.1	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=(-)2V, I_C=(-)50mA$	140		560*	
	$h_{FE}(2)$	$V_{CE}=(-)2V, I_C=(-)500mA$	60			
Gain-Bandwidth Product	$f_T$	$V_{CE}=(-)10V, I_C=(-)50mA$		250		MHz
C-E Saturation Voltage	$V_{CE(sat)}^1$	$I_C=(-)5mA, I_B=(-)0.5mA$		10	25	mV
	$V_{CE(sat)}^2$	$I_C=(-)100mA, I_B=(-)10mA$		(-15)	(-35)	mV
				30	80	mV
				(-60)	(-120)	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)100mA, I_B=(-)10mA$		(-)0.8	(-)1.2	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10μA$		(-)20		V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA$		(-)15		V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10μA$		(-)5		V
Output Capacitance	$c_{ob}$	$V_{CB}=(-)10V, f=1MHz$		8		pF
				(13)		pF

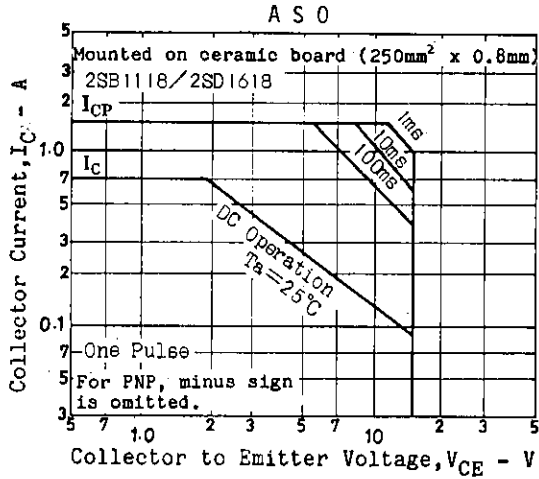
\*:The 2SB1118/2SD1618 are classified by 50mA  $h_{FE}$  as follows:

140	S	280	200	T	400	280	U	560
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Marking 2SB1118:BA  
2SD1618:DA $h_{FE}$  rank :S,T,U**Package Dimensions 2038**  
(unit:mm)E: Emitter  
C: Collector  
B: BaseSANYO: PCP  
(Bottom View)**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**  
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# 2SB1118/2SD1618





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