

<b>SANYO</b>	No.3182B	<b>2SA1766</b>
	PNP Epitaxial Planar Silicon Transistor High $h_{FE}$ , Low-Frequency General-Purpose Amp Applications	

**Features**

- Adoption of FBET, MBIT processes
- High DC current gain ( $h_{FE} = 500$  to  $1200$ )
- Large current capacity
- Low collector-to-emitter saturation voltage
- High  $V_{EBO}$

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

			unit
Collector to Base Voltage	$V_{CBO}$	-30	V
Collector to Emitter Voltage	$V_{CEO}$	-25	V
Emitter to Base Voltage	$V_{EBO}$	-15	V
Collector Current	$I_C$	-300	mA
Collector Current(Pulse)	$I_{CP}$	-500	mA
Base Current	$I_B$	-60	mA
Collector Dissipation	$P_C$ Mounted on ceramic board ( $250\text{mm}^2 \times 0.8\text{mm}$ )	1.3	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

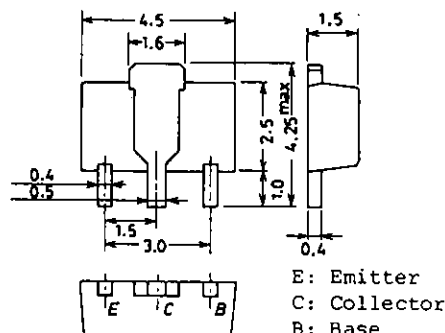
**Electrical Characteristics at  $T_a = 25^\circ\text{C}$**

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = -20\text{V}, I_E = 0$			-0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = -10\text{V}, I_C = 0$			-0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}(1)$	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$	500	800	1200	
	$h_{FE}(2)$	$V_{CE} = -5\text{V}, I_C = -200\text{mA}$	200			
Gain-Bandwidth Product	$f_T$	$V_{CE} = -10\text{V}, I_C = -10\text{mA}$		100		MHz
Output Capacitance	$c_{ob}$	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		12		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = -200\text{mA}, I_B = -4\text{mA}$	-0.12	-0.50		V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = -200\text{mA}, I_B = -4\text{mA}$	-0.77	-1.10		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-30			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, R_{BE} = \infty$	-25			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	-15			V

Marking : AL

**Package Dimensions 2038**

(unit : mm)



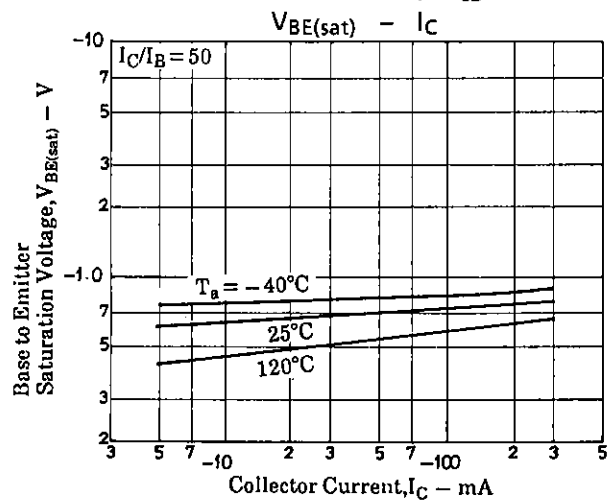
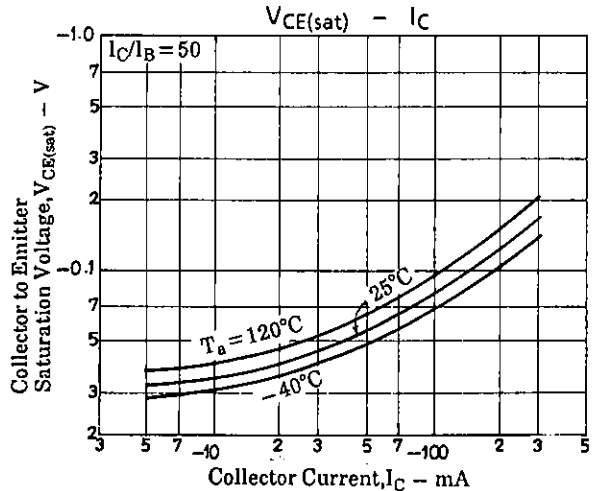
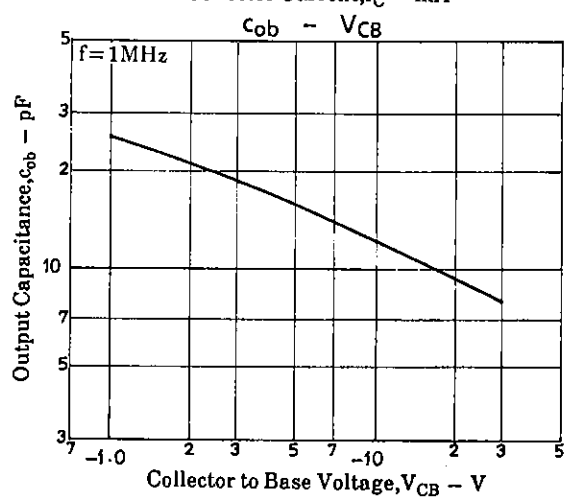
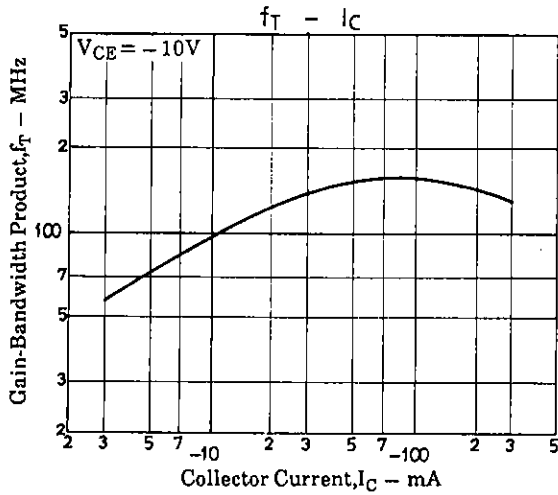
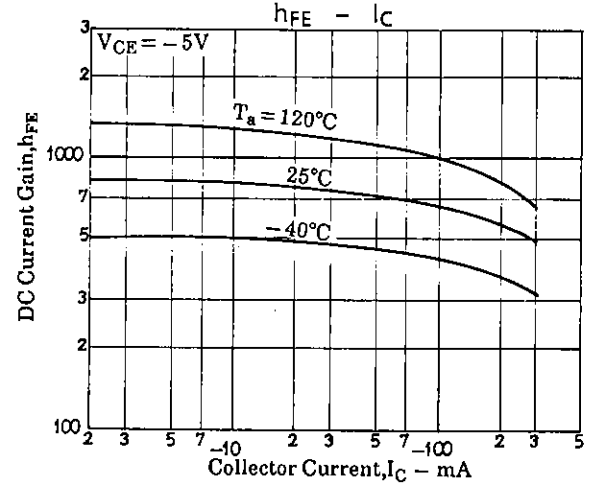
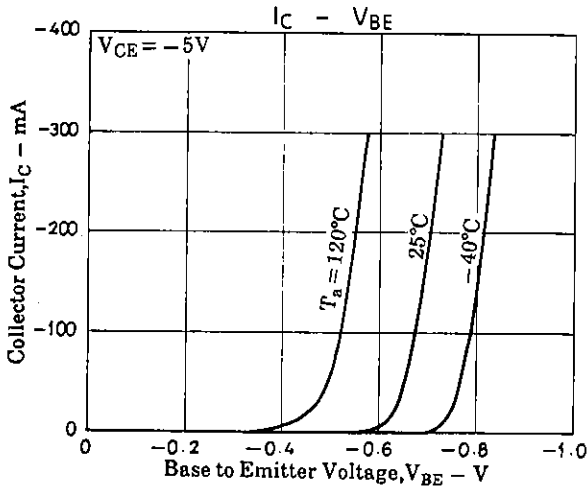
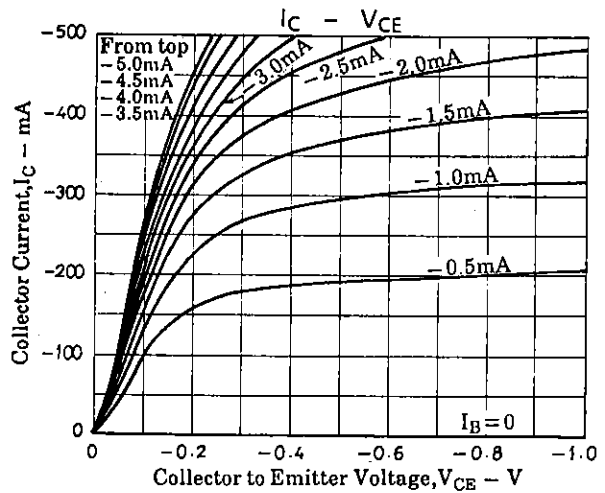
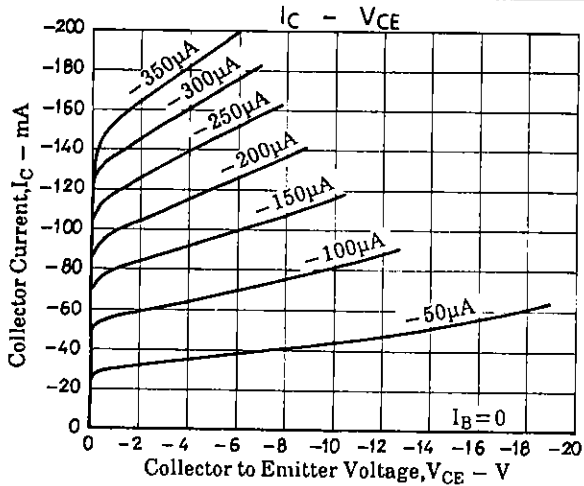
E: Emitter  
C: Collector  
B: Base

SANYO: PCP

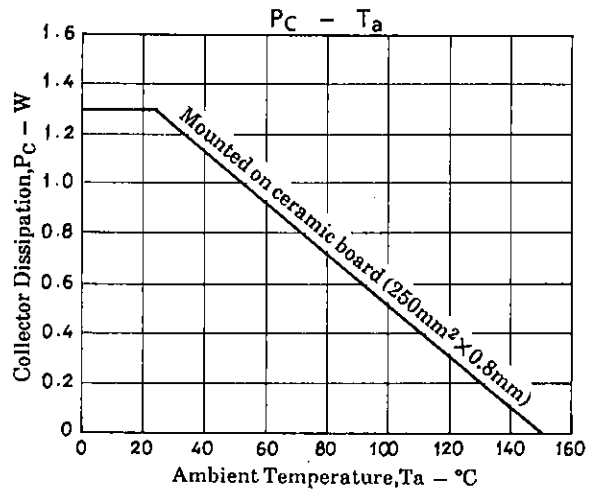
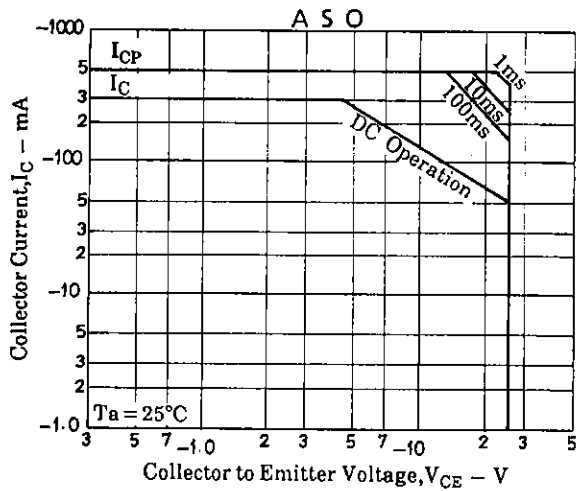
(Bottom View)

**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

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



## 2SA1766



- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
  - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use;
  - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.