



No.1779A

**2SC3651**

NPN Epitaxial Planar Silicon Transistor

High  $h_{FE}$ , Low-Frequency  
General-Purpose Amp Applications

**Applications**

- . LF amp, various drivers, muting circuit

**Features**

- . High DC current gain ( $h_{FE}=500$  to 2000)
- . High breakdown voltage ( $V_{CEO} \geq 100V$ )
- . Low collector-to-emitter saturation voltage [ $V_{CE(sat)} \leq 0.5V$ ]
- . High  $V_{EBO}$  ( $V_{EBO} \geq 15V$ )
- . Very small size making it easy to provide high-density, small-sized hybrid IC's.

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

			unit
Collector to Base Voltage	$V_{CBO}$	120	V
Collector to Emitter Voltage	$V_{CEO}$	100	V
Emitter to Base Voltage	$V_{EBO}$	15	V
Collector Current	$I_C$	200	mA
Collector Current(Pulse)	$I_{CP}$	300	mA
Collector Dissipation	$P_C$	500	mW
	$P_C^*$	1.3	W
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ C$

\* Mounted on ceramic board (250mm<sup>2</sup>x0.8mm)

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

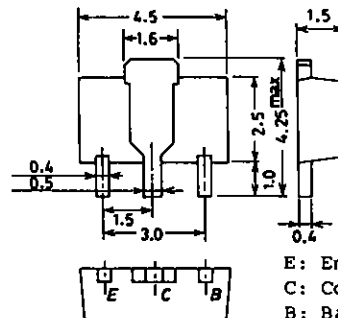
			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=80V, I_E=0$			0.1	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=10V, I_C=0$			0.1	$\mu A$
DC Current Gain	$h_{FE}(1)$	$V_{CE}=5V, I_C=10mA$	500	1000	2000	
	$h_{FE}(2)$	$V_{CE}=5V, I_C=100mA$	400			
Gain-Bandwidth Product	$f_T$	$V_{CE}=10V, I_C=10mA$		150		MHz
Output Capacitance	$c_{ob}$	$V_{CB}=10V, f=1MHz$		6.5		pF
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=2mA$	0.15	0.5		V

Continued on next page.

Marking: CG

**Package Dimensions 2038**

(unit:mm)



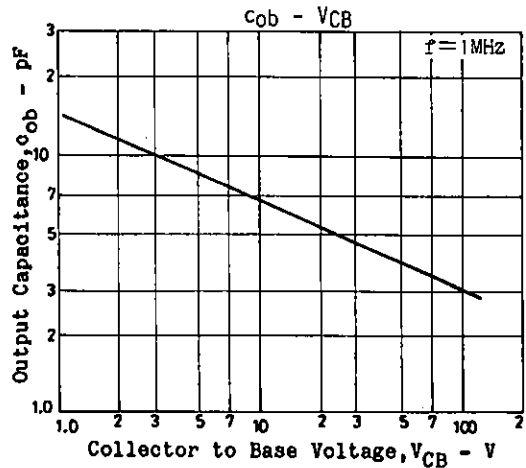
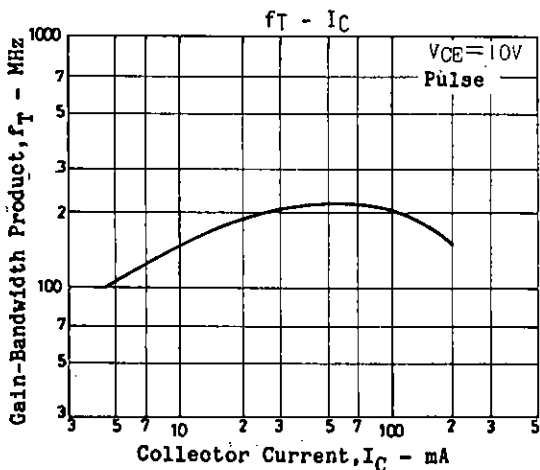
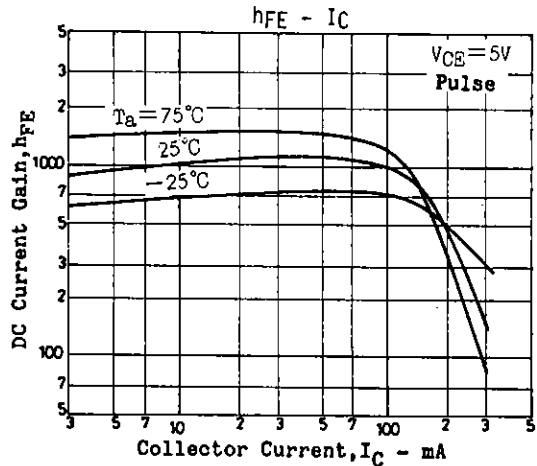
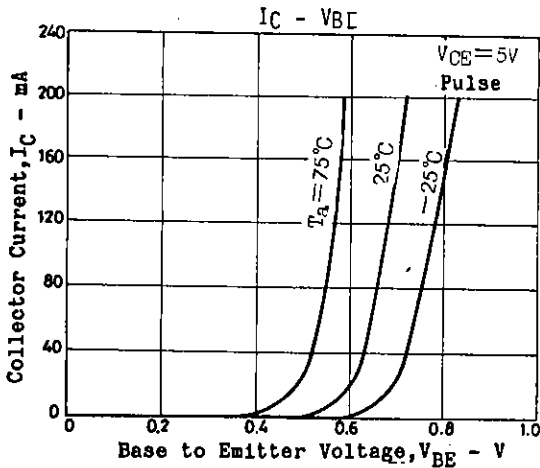
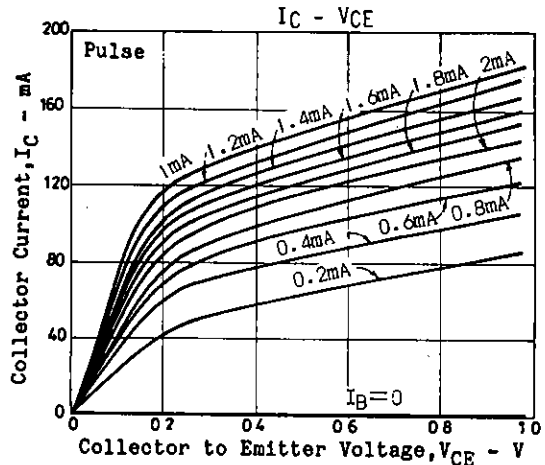
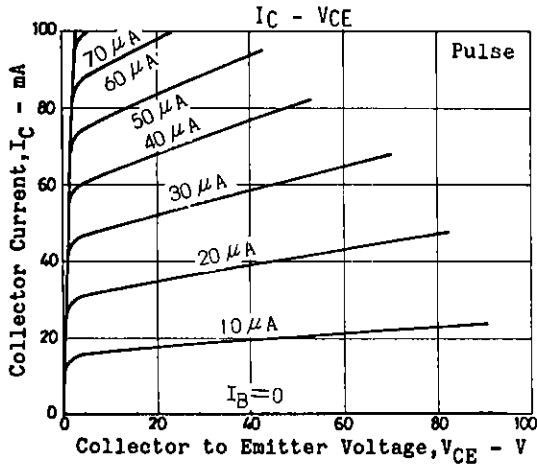
E: Emitter  
C: Collector  
B: Base  
SANYO: PCP  
(Bottom View)

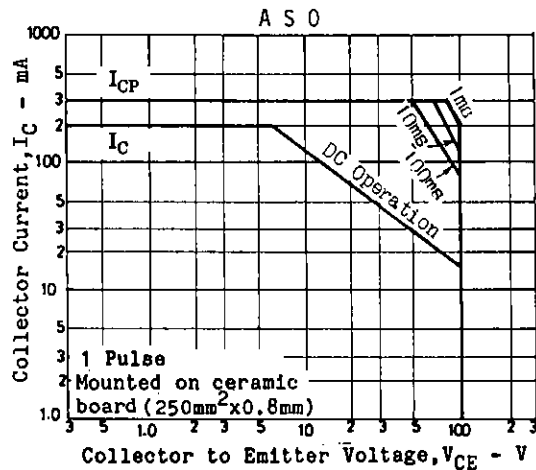
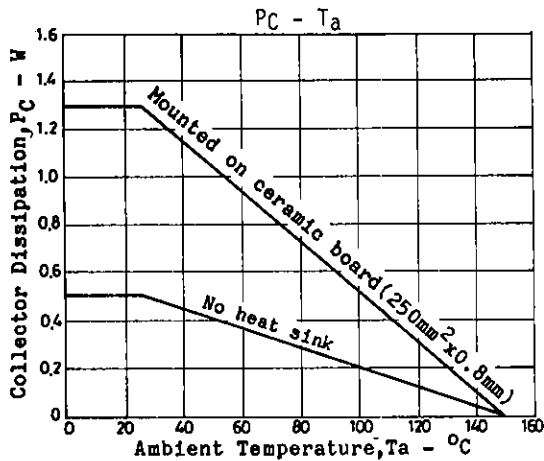
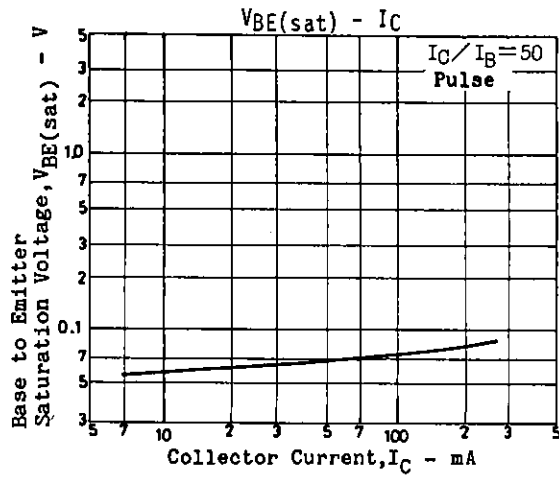
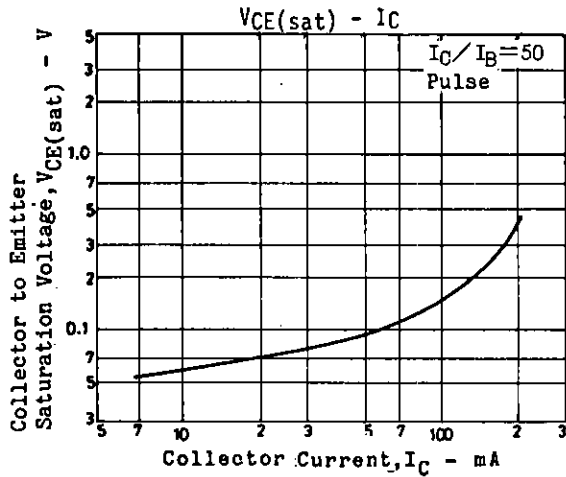
**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

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

Continued from preceding page.

			min	typ	max	unit
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100mA, I_E=2mA$	0.85	1.2		V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	120			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	100			V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	15			V





■ 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.