

<b>SANYO</b>	No.2544B	<b>2SC3820</b>
	NPN Epitaxial Planar Type Silicon Transistor High $h_{FE}$ , AF Amp Applications	

**Applications**

- Drivers, muting circuits

**Features**

- Adoption of FBET and MBIT processes
- High DC current gain ( $h_{FE} = 800$  to  $3200$ )
- Low collector-to-emitter saturation voltage ( $V_{CE(sat)} \leq 0.5V$ )
- High  $V_{EBO}$  ( $V_{EBO} \geq 15V$ )
- Small  $c_{ob}$  ( $c_{ob} = 2.0pF$  typ)

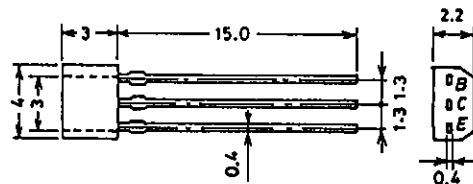
**Absolute Maximum Ratings at  $T_a = 25^\circ C$**

			unit
Collector to Base Voltage	$V_{CBO}$	60	V
Collector to Emitter Voltage	$V_{CEO}$	50	V
Emitter to Base Voltage	$V_{EBO}$	15	V
Collector Current	$I_C$	100	mA
Collector Current(Pulse)	$I_{CP}$	200	mA
Collector Dissipation	$P_C$	300	mW
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ C$

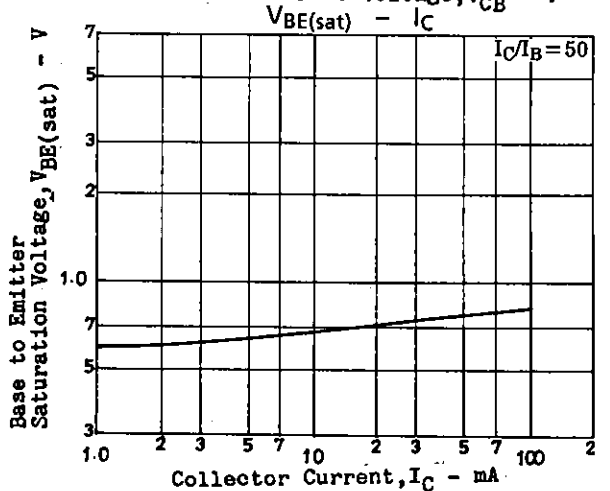
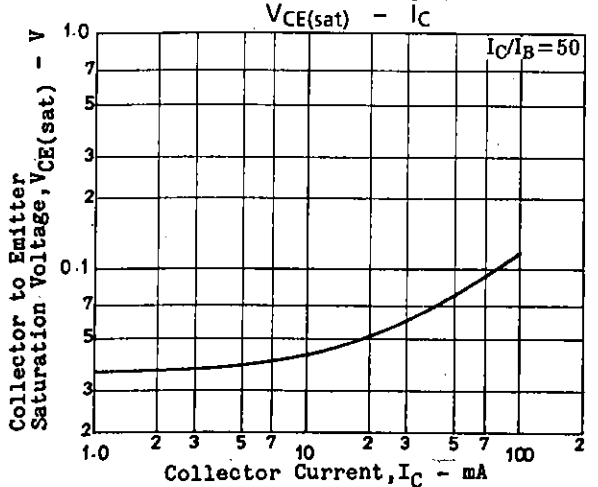
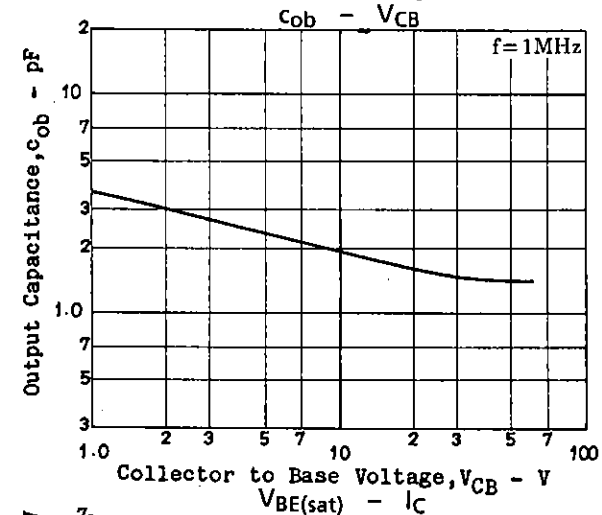
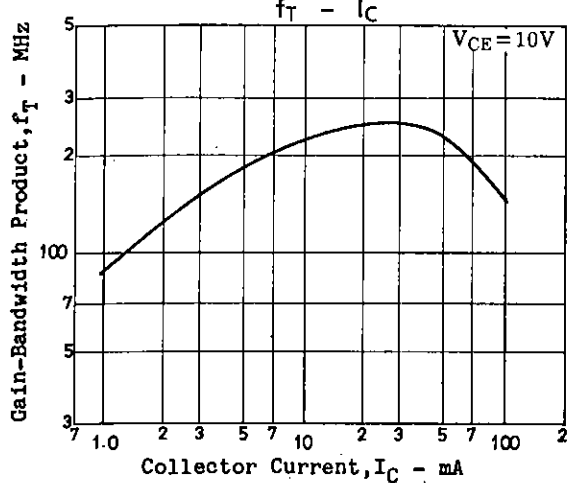
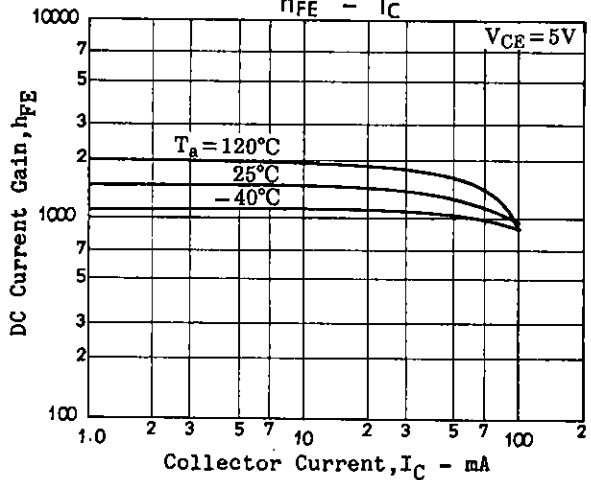
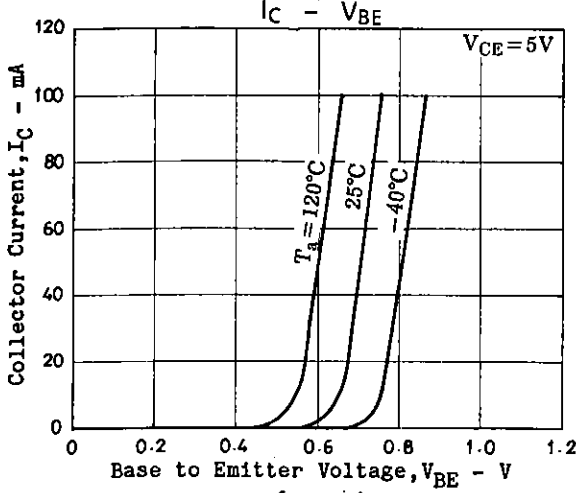
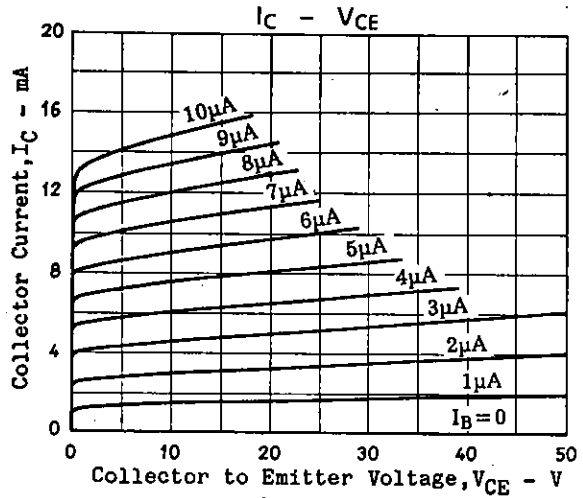
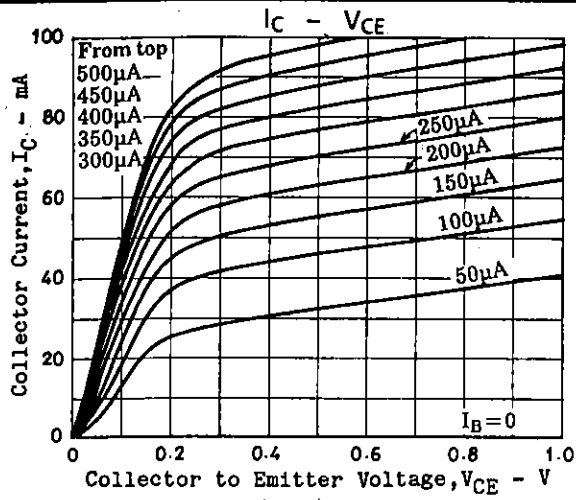
**Electrical Characteristics at  $T_a = 25^\circ C$**

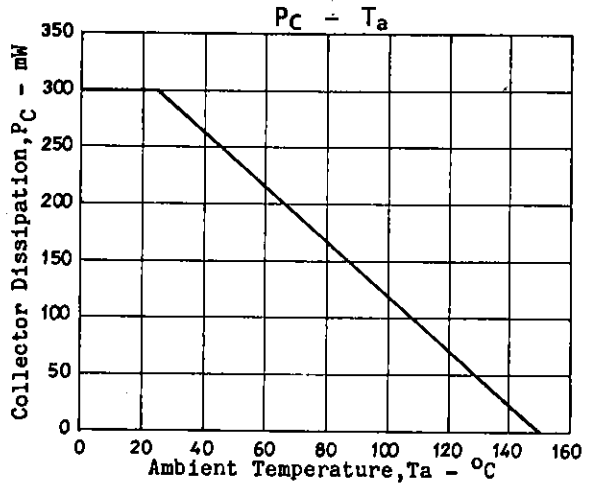
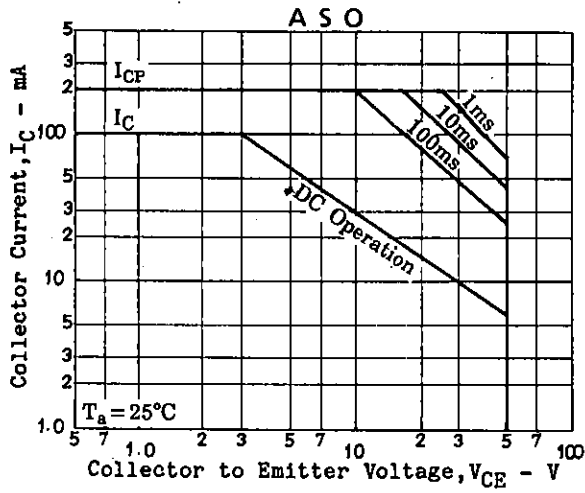
			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 40V, I_E = 0$			0.1	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 10V, I_C = 0$			0.1	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE} = 5V, I_C = 10mA$	800	1500	3200	
Gain-Bandwidth Product	$f_T$	$V_{CE} = 10V, I_C = 10mA$		200		MHz
Output Capacitance	$c_{ob}$	$V_{CB} = 10V, f = 1MHz$		2.0		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 50mA, I_B = 1mA$		0.1	-0.5	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 50mA, I_B = 1mA$		0.8	1.1	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu A, I_E = 0$	60			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1mA, R_{BE} = \infty$	50			V
E-B Breakdown Voltage	$V_{(BR)CBO}$	$I_E = 10\mu A, I_C = 0$	15			V

**Package Dimensions 2033**  
(unit: mm)



B: Base  
 C: Collector  
 E: Emitter  
 SANYO: SPA





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