

SANYO	No. 2018A	2 S C 3 8 0 7
	NPN Epitaxial Planar Silicon Transistor HIGH h_{FE} , LOW FREQUENCY, GENERAL-PURPOSE AMP APPLICATIONS	

Applications

- Low frequency general-purpose amplifiers, drivers

Features

- Large current capacity ($I_C=2A$)
- Adoption of MBIT process
- High DC current gain ($h_{FE}=800$ to 3200)
- Low collector-to-emitter saturation voltage ($V_{CE(sat)} \leq 0.5V$)
- High V_{EBO} ($V_{EBO} \geq 15V$)

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

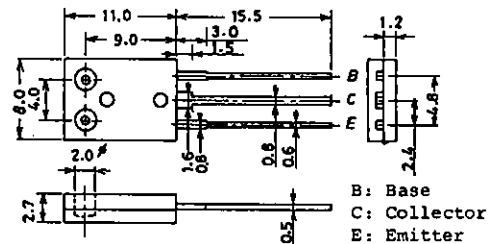
		unit
Collector to Base Voltage	V_{CB0}	30 V
Collector to Emitter Voltage	V_{CEO}	25 V
Emitter to Base Voltage	V_{EBO}	15 V
Collector Current	I_C	2 A
Peak Collector Current	i_{cp}	4 A
Collector Dissipation	P_c	1.2 W
	$T_c=25^\circ C$	15 W
Junction Temperature	T_j	150 $^\circ C$
Storage Temperature	T_{stg}	-55 to +150 $^\circ C$

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

		min	typ	max	unit
Collector Cutoff Current	I_{CB0} $V_{CB}=20V, I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EBO} $V_{EB}=10V, I_C=0$			0.1	μA
DC Current Gain	$h_{FE}(1)$ $V_{CE}=5V, I_C=500mA$	800	1500	3200	
	$h_{FE}(2)$ $V_{CE}=5V, I_C=1A$	600			
Gain-Bandwidth Product	f_T $V_{CE}=10V, I_C=50mA$		260		MHz
Output Capacitance	c_{ob} $V_{CE}=10V, f=1MHz$		27		pF
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$ $I_C=1A, I_B=20mA$	0.15	0.5		V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$ $I_C=1A, I_B=20mA$	0.85	1.2		V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$ $I_C=10\mu A, I_E=0$	30			V

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Package Dimensions 2043A
(unit: mm)

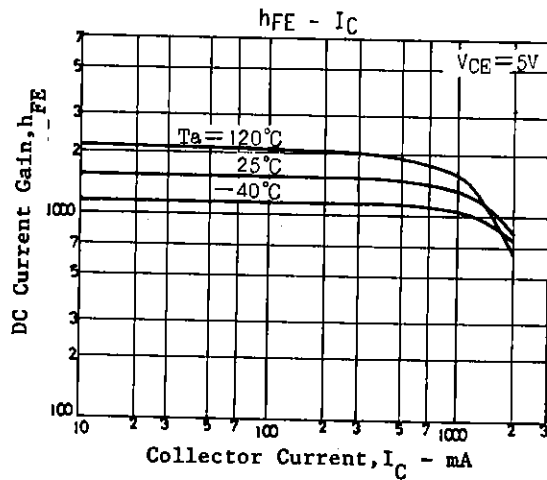
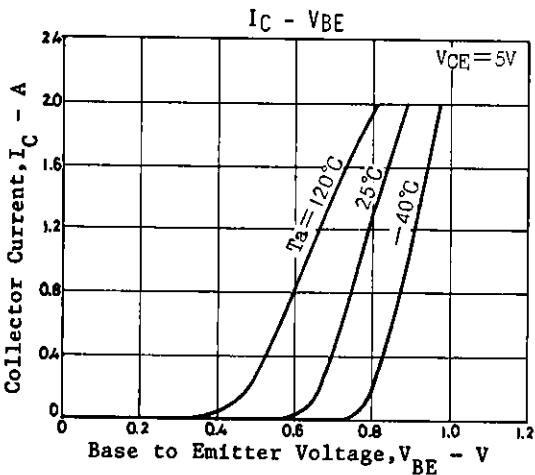
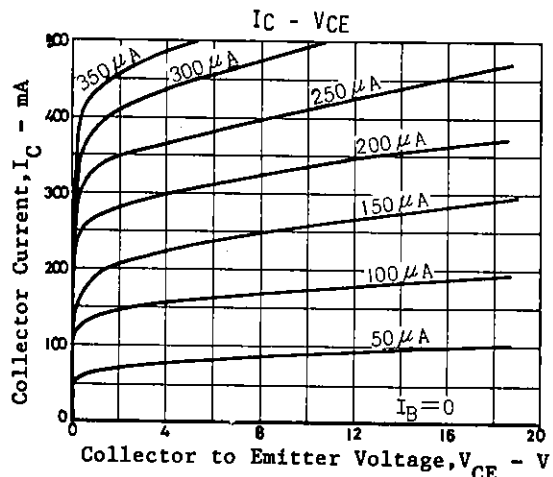
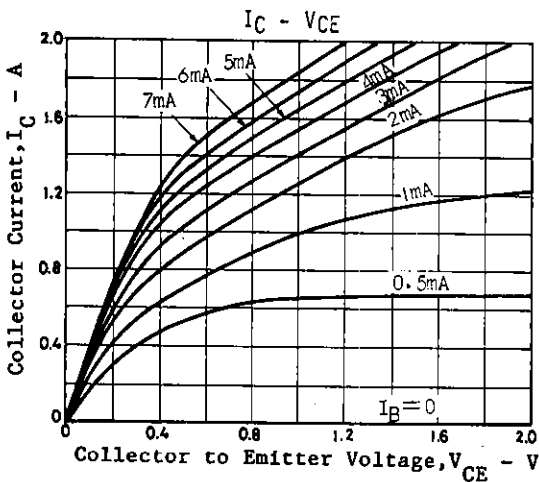
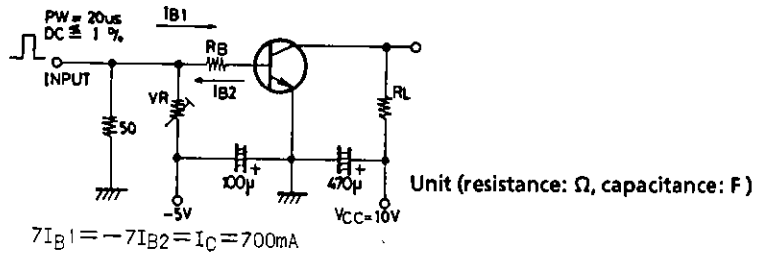


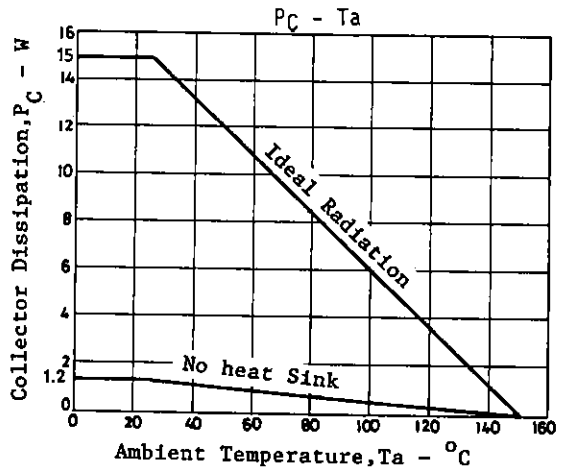
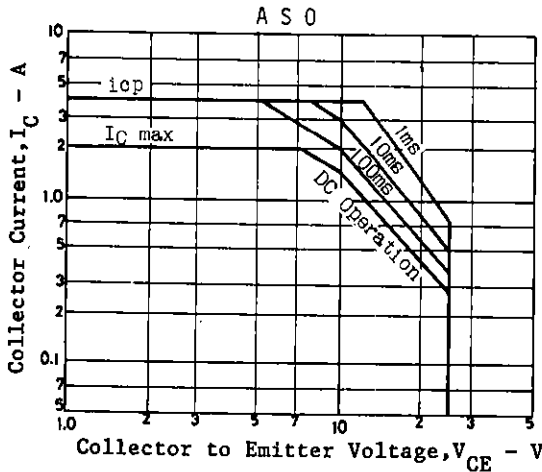
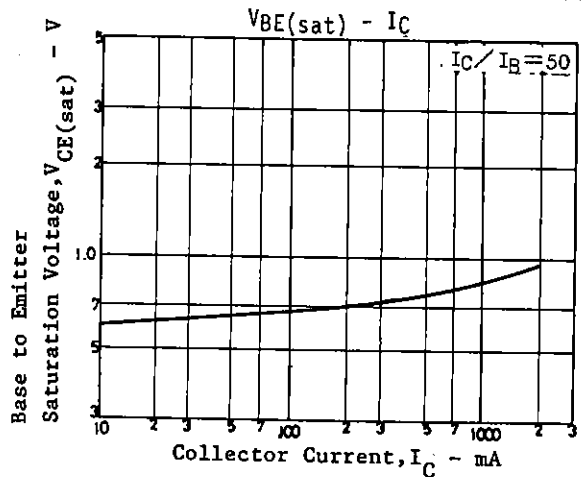
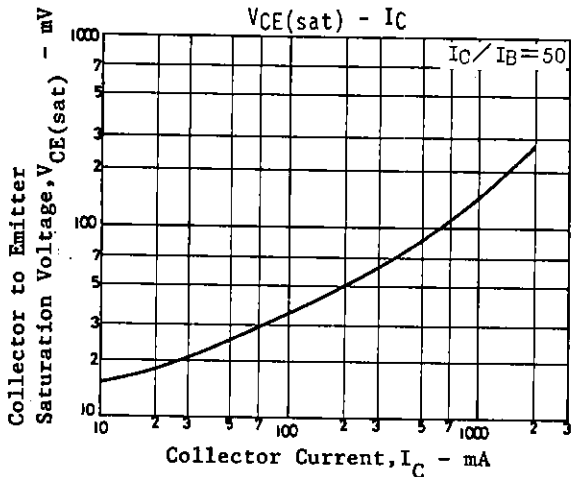
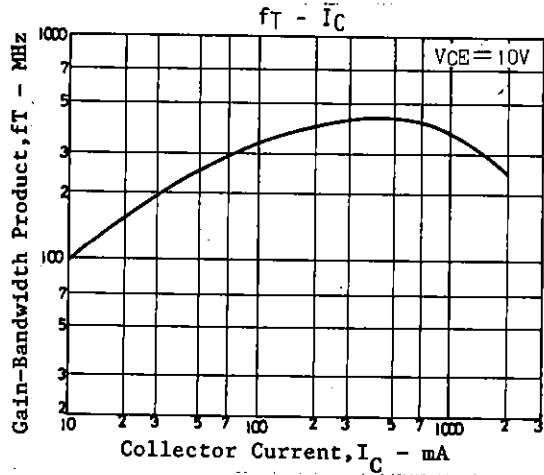
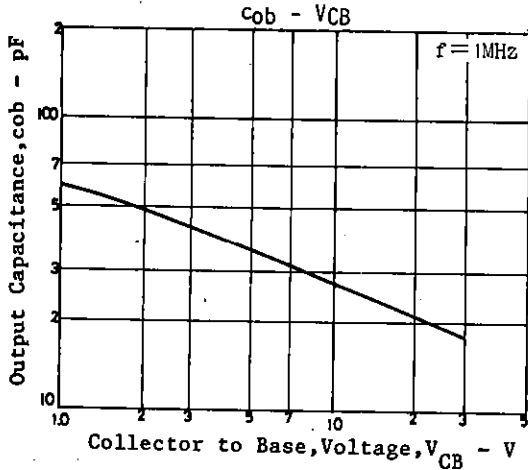
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			min	typ	max	unit
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	25			V
Emitter to Base	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	15			V
Turn-on time	t_{on}	See specified Test Circuit.	0.14			μs
Storage Temperature	t_{stg}	"	1.35			μs
Fall Time	t_f	"	0.1			μs

Switching Time Test Circuit





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