

SANYO

No.1855A

2SC3689

NPN Epitaxial Planar Silicon Transistor

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

Applications

- Low frequency general-purpose amplifiers, drivers, muting circuits

Features

- Small c_{ob} ($c_{ob}=1.5\text{pF}$ typ.)
- Very small-sized package permitting 2SC3689-used sets to be made smaller, slimmer.
- Adoption of FBET process.
- High DC current gain ($h_{FE}=800$ to 3200).
- Low collector-to-emitter saturation voltage ($V_{CE(sat)} \leq 0.5\text{V}$).
- High V_{EBO} ($V_{EBO} \geq 15\text{V}$).

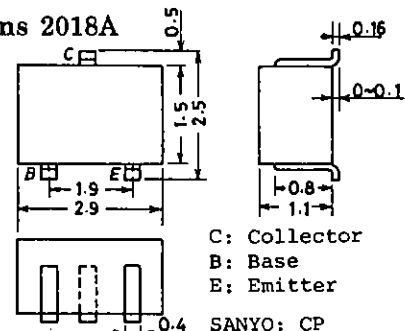
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

			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	200	mW
Junction Temperature	T_J	125	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

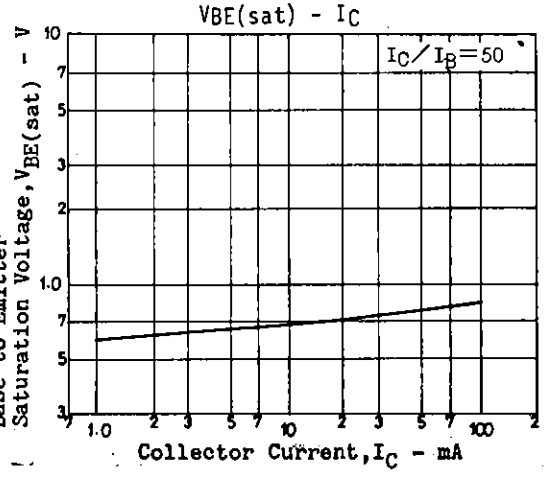
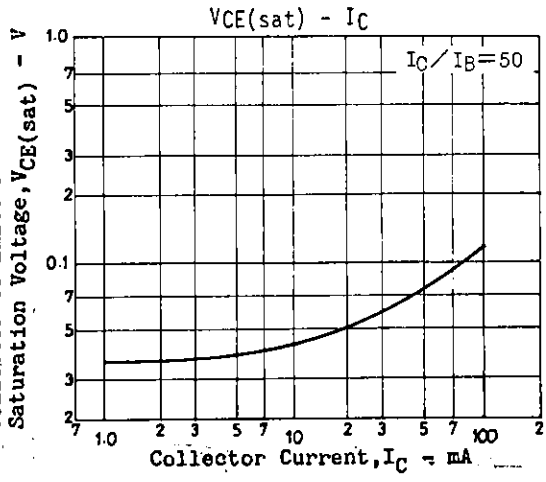
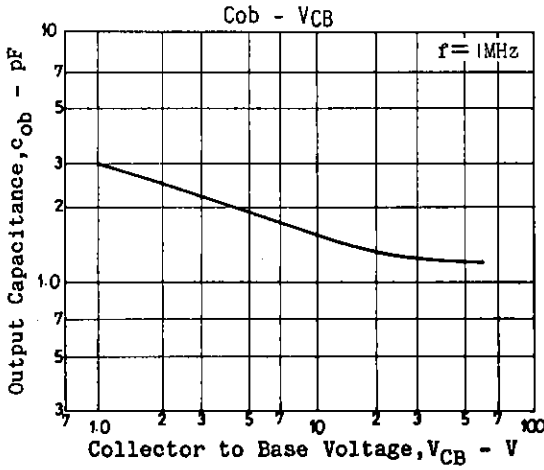
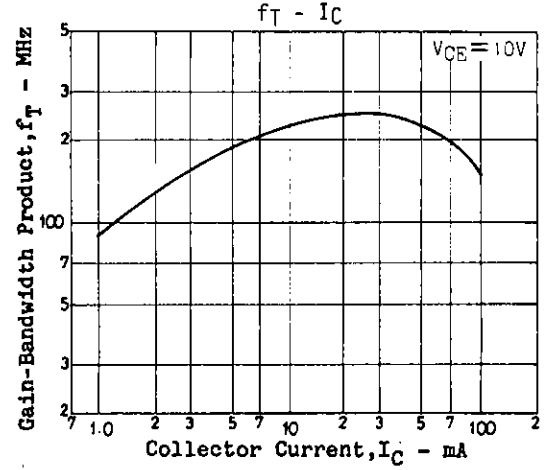
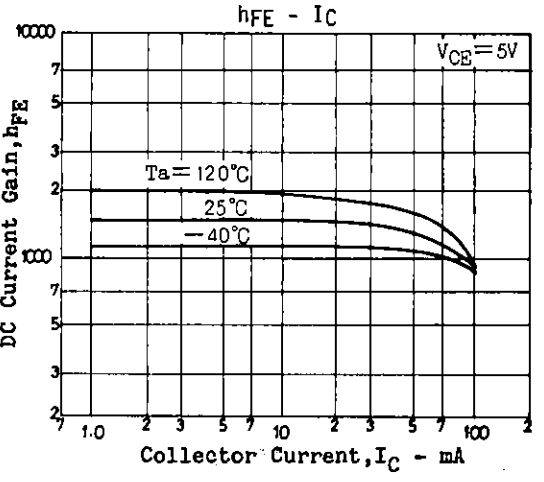
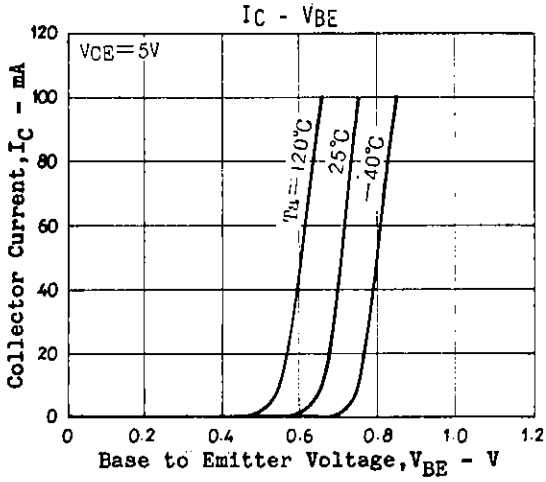
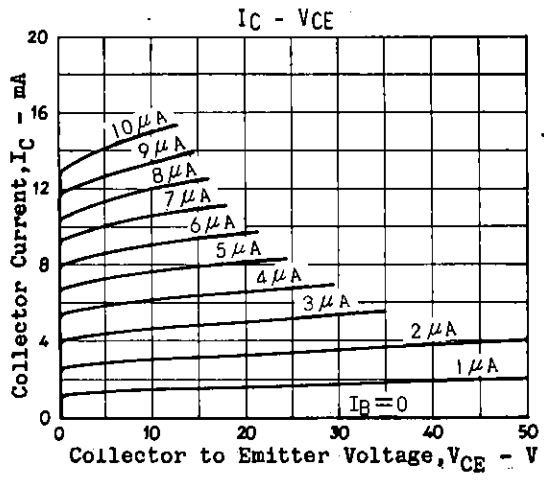
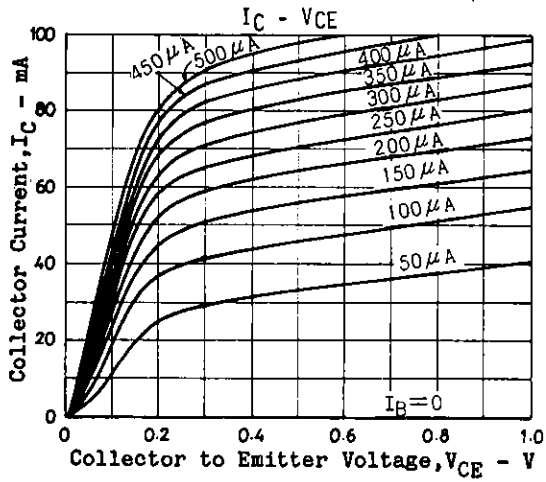
Electrical Characteristics at $T_a=25^\circ\text{C}$

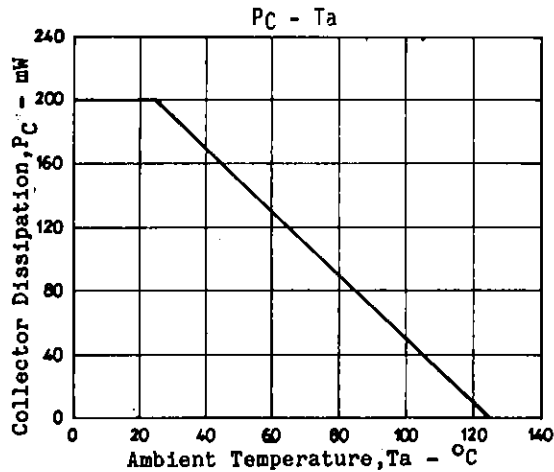
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=40\text{V}, I_E=0$			0.1	μA
Emitter Cutoff Voltage	I_{EBO}	$V_{EB}=10\text{V}, I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=5\text{V}, I_C=10\text{mA}$	800	1500	3200	
Gain-Bandwidth Product	f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}$		200		MHz
Output Capacitance	c_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		1.5		pF
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=50\text{mA}, I_B=1\text{mA}$	0.1	0.5		V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=50\text{mA}, I_E=1\text{mA}$	0.8	1.1		V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	60			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, R_{BE}=\infty$	50			V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	15			V

Marking ----- GY

Package Dimensions 2018A
(unit:mm)

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