

**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  $V_{EBO}$  ( $V_{EBO} \geq 15\text{V}$ ).

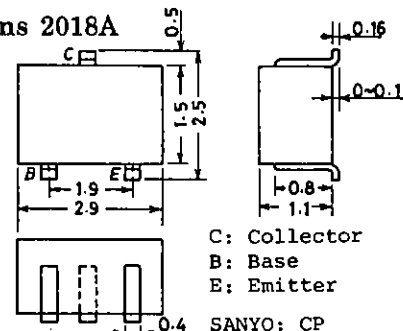
**Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$** 

			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	$^\circ\text{C}$

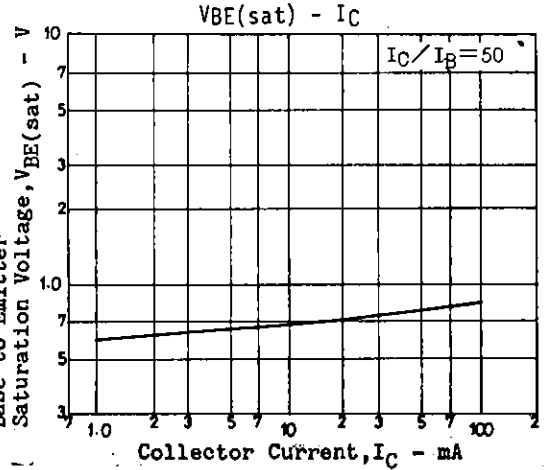
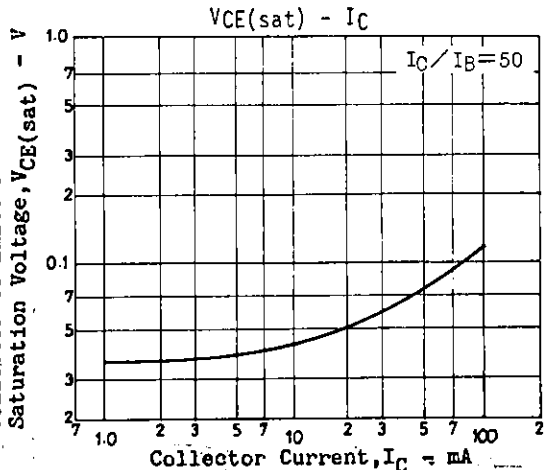
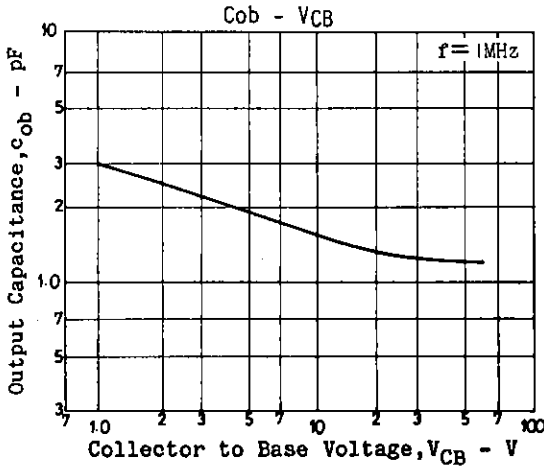
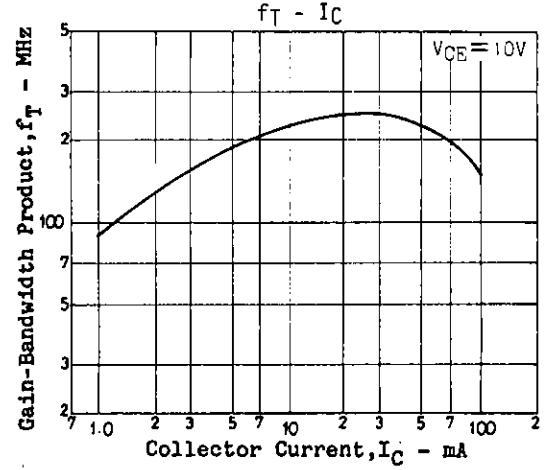
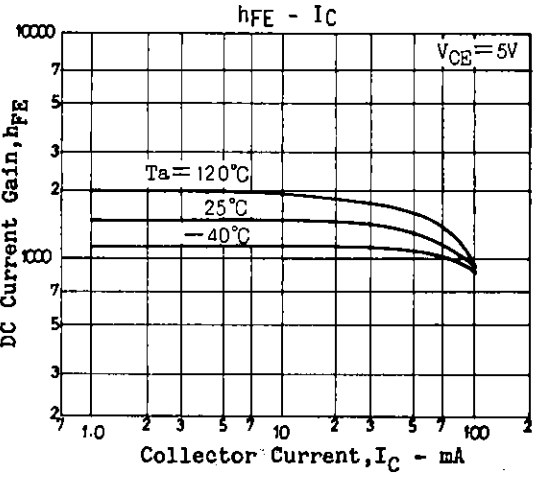
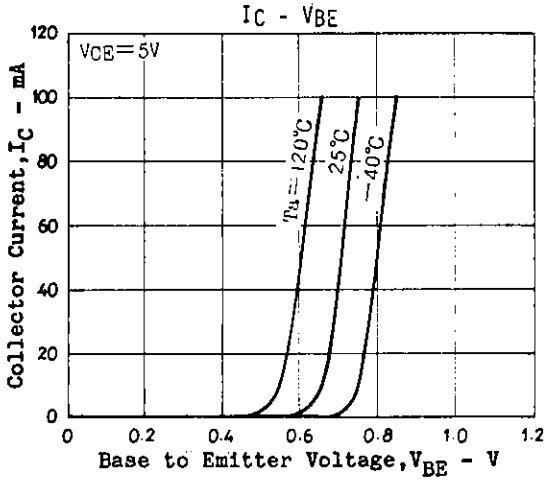
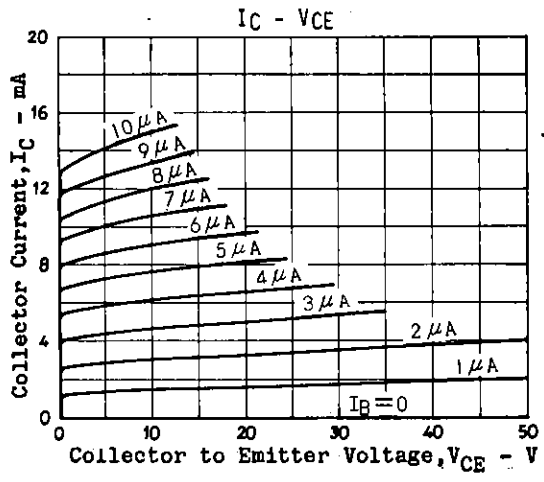
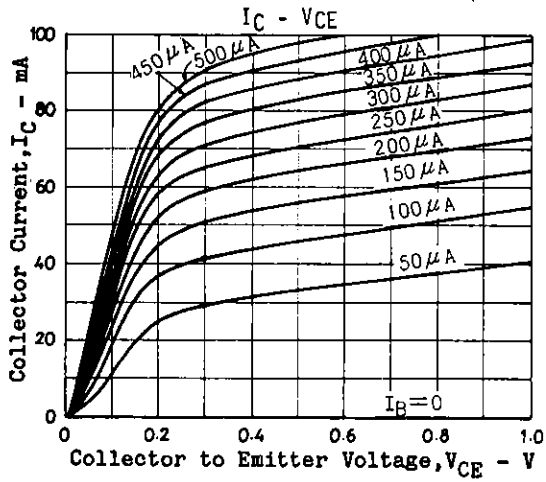
**Electrical Characteristics at  $T_a=25^\circ\text{C}$** 

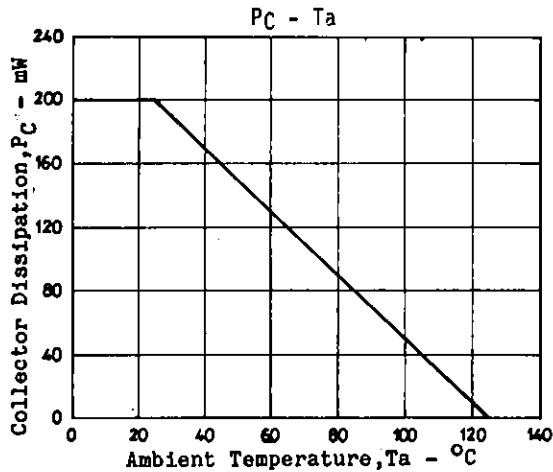
			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=40\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter Cutoff Voltage	$I_{EBO}$	$V_{EB}=10\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=5\text{V}, I_C=10\text{mA}$	800	1500	3200	
Gain-Bandwidth Product	$f_T$	$V_{CE}=10\text{V}, I_C=10\text{mA}$		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)**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

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