

**2SC3689**

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

Applications

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

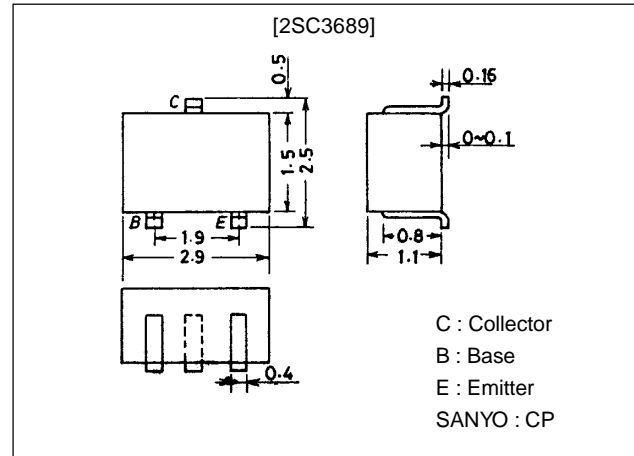
Features

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

Package Dimensions

unit:mm

2018A



Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		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 $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CB0}	$V_{CB}=40\text{V}, I_E=0$			0.1	μA
Emitter Cutoff Current	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	$V_{BE(sat)}$	$I_C=50\text{mA}, I_B=1\text{mA}$		0.8	1.1	V

Marking : GY

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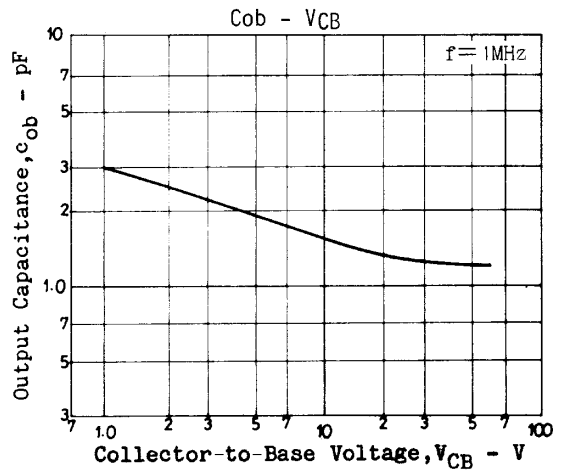
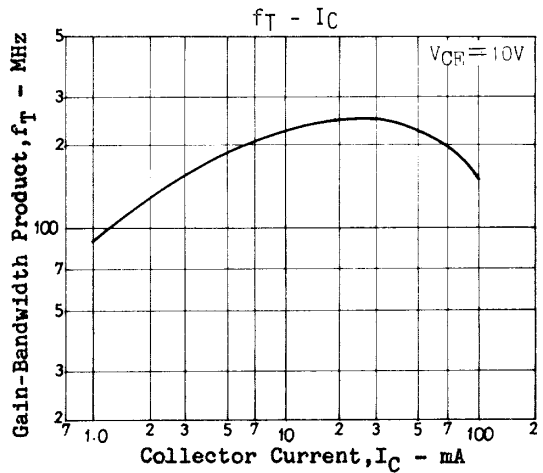
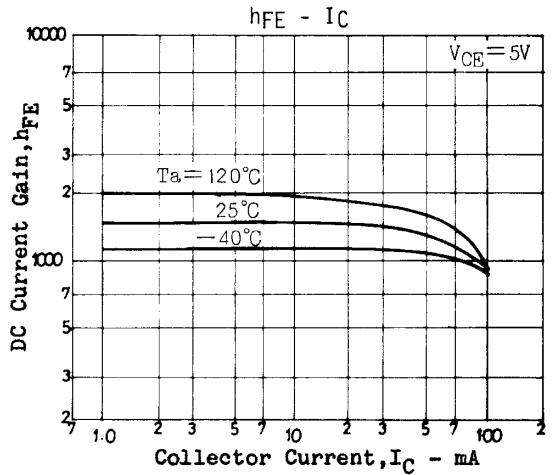
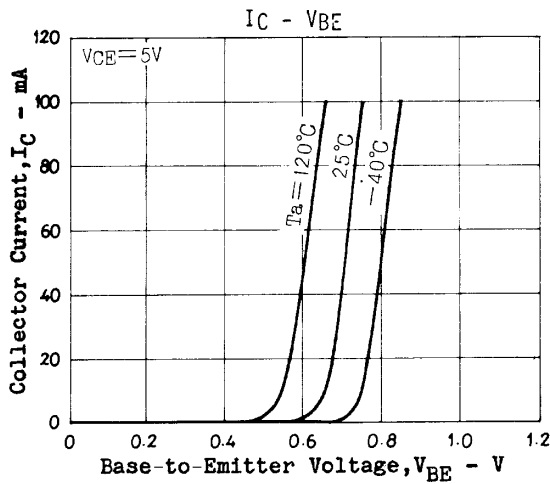
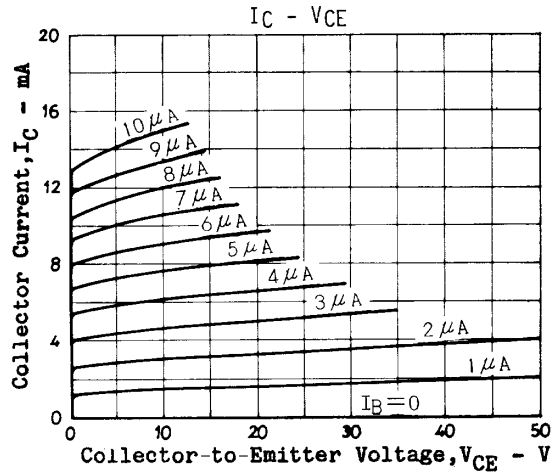
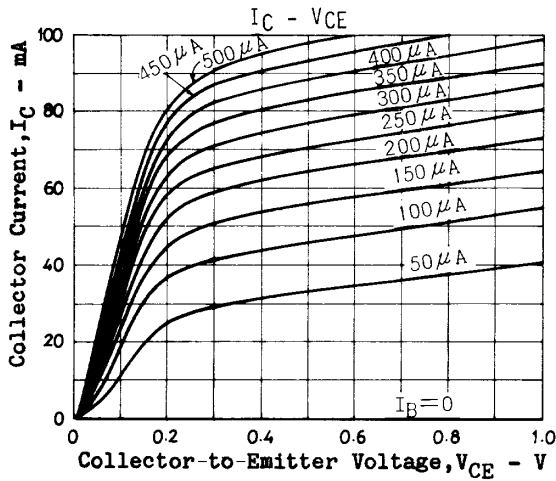
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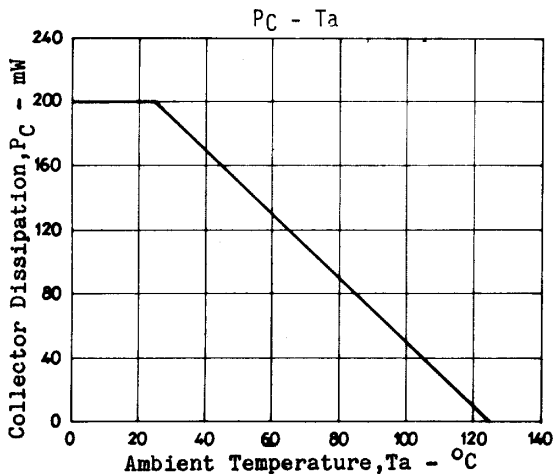
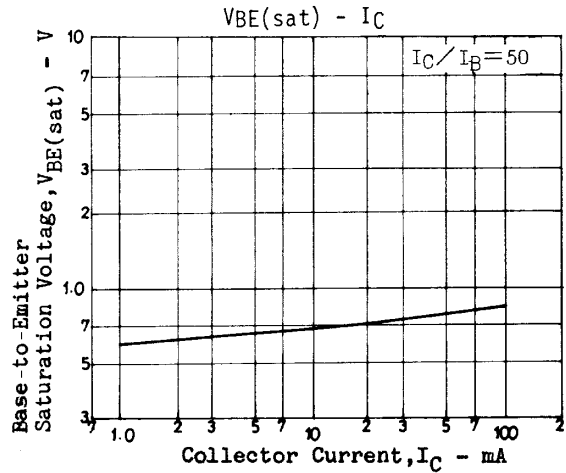
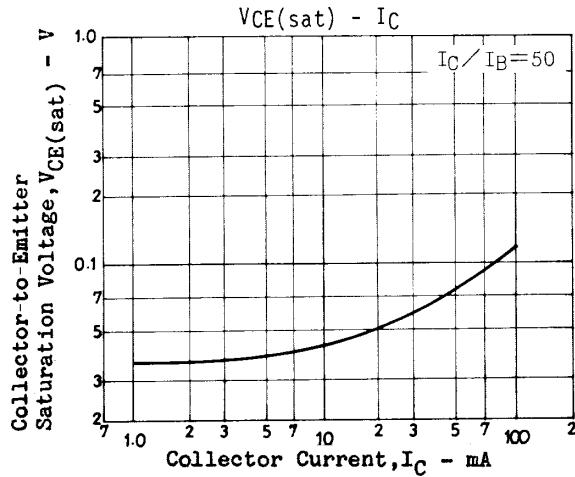
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N3098HA (KT)/4237AT/N195KI, TS No.1855-1/3

2SC3689

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	15			V





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