

**2SC3069**

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

### Applications

- Low-frequency, general-purpose amplifier., various drivers, muting circuit.

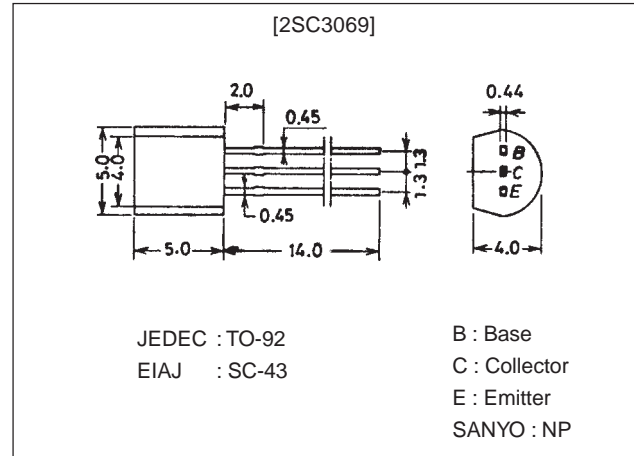
### Features

- High DC current gain ( $h_{FE}=800$  to 3200).
- Low collector-to-emitter saturation voltage ( $V_{CE(sat)}=0.5V$  max).
- High  $V_{EBO}$  ( $V_{EBO}\geq 15V$ ).

### Package Dimensions

unit:mm

2003A



### Specifications

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

Parameter	Symbol	Conditions	Ratings	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	$I_C$		200	mA
Collector Current (Pulse)	$I_{CP}$		300	mA
Base Current	$I_B$		40	mA
Collector Dissipation	$P_C$		600	mW
Junction Temperature	$T_j$		150	$^\circ C$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ C$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
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	$h_{FE1}$	$V_{CE}=5V, I_C=10mA$	800	1500	3200	
	$h_{FE2}$	$V_{CE}=5V, I_C=100mA$	600			
Gain-Bandwidth Product	$f_T$	$V_{CE}=10V, I_C=10mA$		250		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10V, f=1MHz$		4.0		pF

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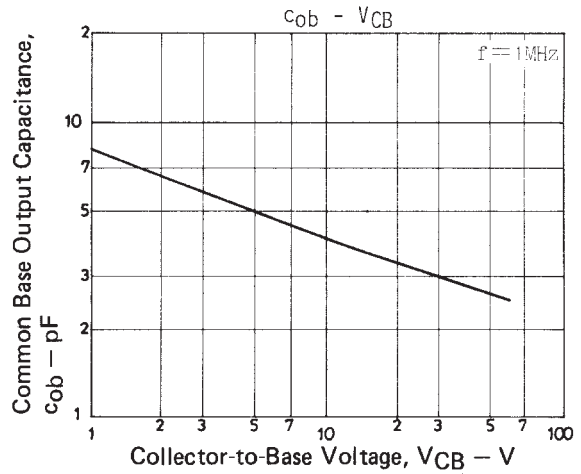
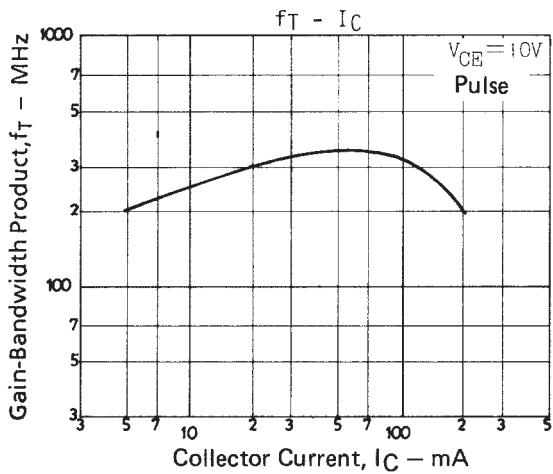
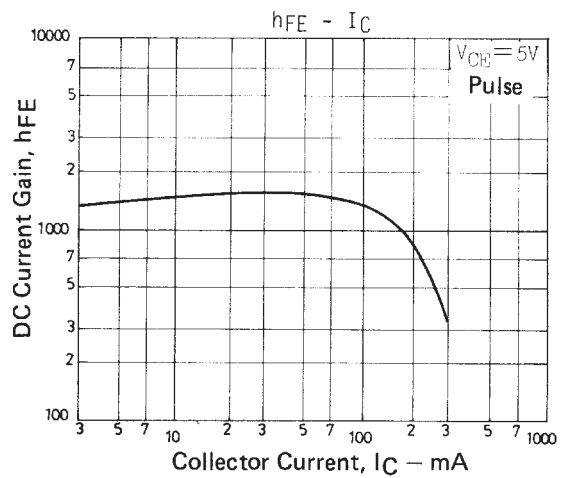
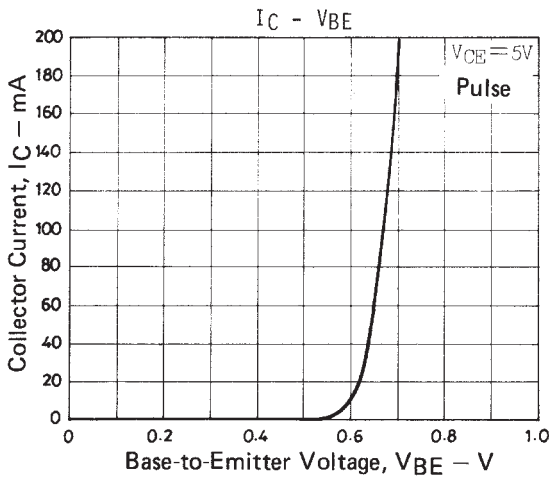
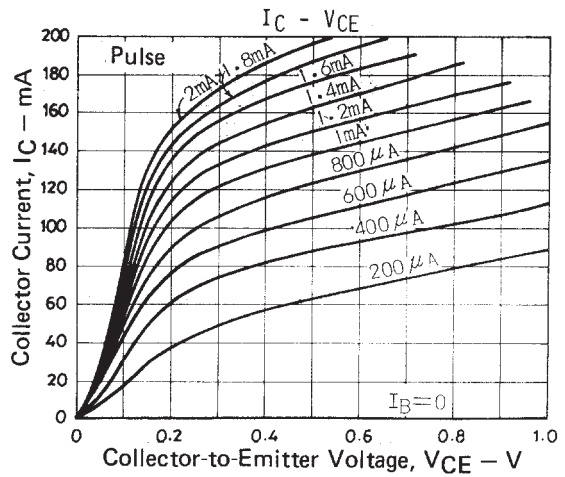
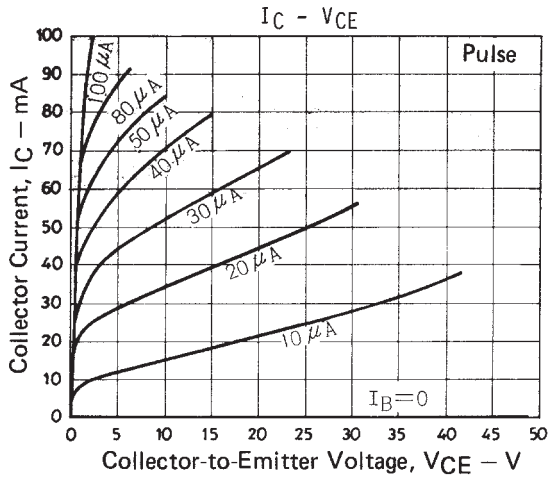
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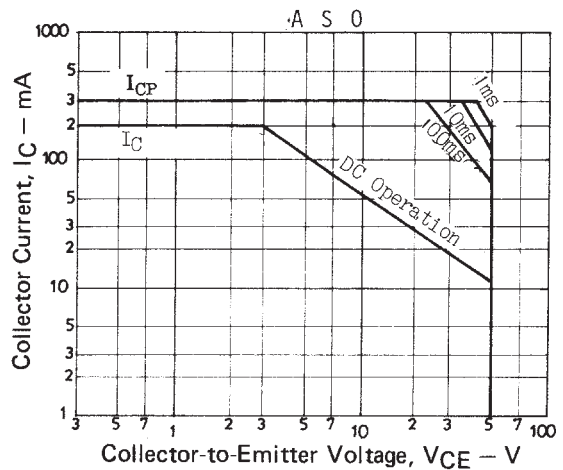
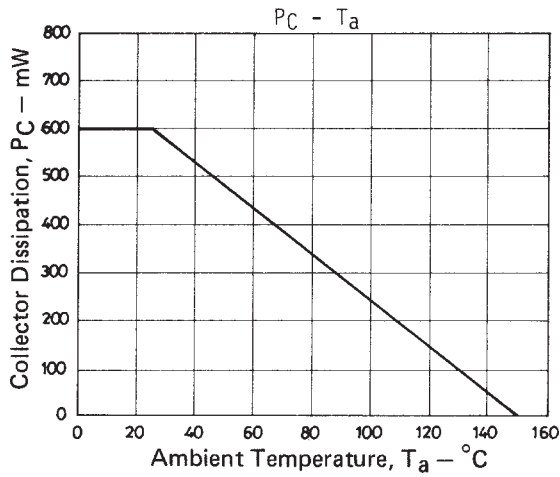
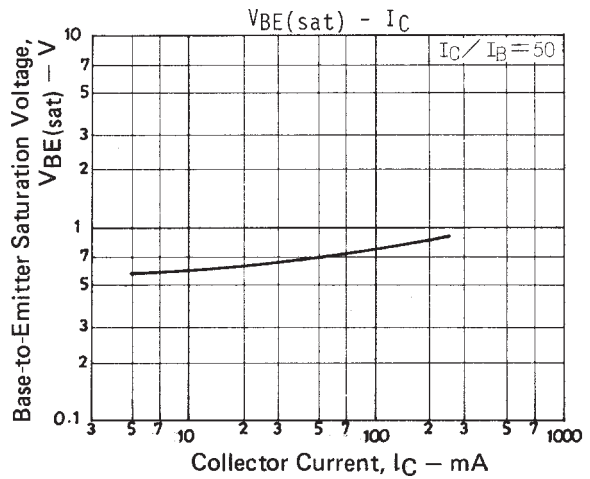
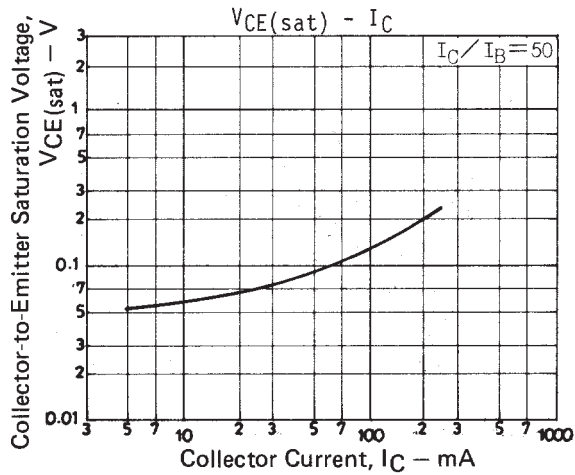
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# 2SC3069

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=2mA$		0.12	0.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=2mA$		0.85	1.2	V
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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