

# 2SC3071

# High h<sub>FE</sub>, Low-Frequency General-Purpose Amplifier Applications

## **Applications**

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

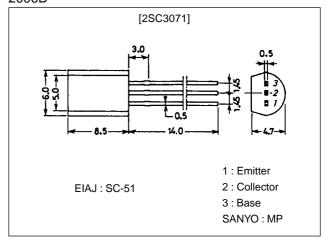
#### **Features**

- · High DC current gain (h<sub>FE</sub>=500 to 2000).
- · High breakdown voltage (V<sub>CEO</sub>≥100V).
- · Low collector-to-emitter saturation voltage ( $V_{CE(sat)} \le 0.5V$ ).
- $\cdot$  High  $V_{EBO}$  ( $V_{EBO} \ge 15V$ ).

## **Package Dimensions**

unit:mm

#### 2006B



## **Specifications**

#### Absolute Maximum Ratings at Ta = 25°C

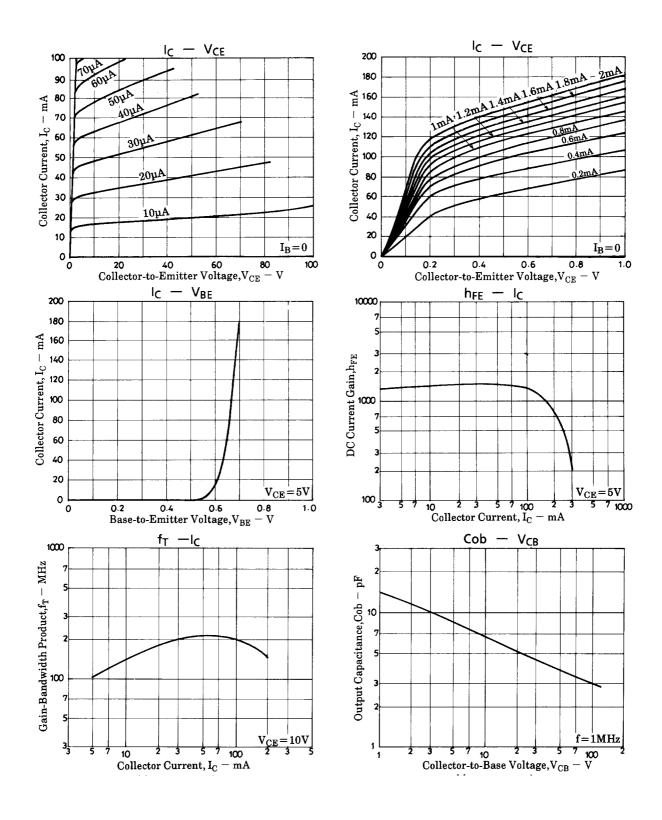
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Parameter	Symbol	Conditions	Ratings	Unit	
Collector-to-Base Voltage	V <sub>CBO</sub>		120	V	
Collector-to-Emitter Voltage	V <sub>CEO</sub>		100	V	
Emitter-to-Base Voltage	V <sub>EBO</sub>		15	V	
Collector Current	IC		200	mA	
Collector Current (Pulse)	I <sub>CP</sub>		300	mA	
Base Current	IB		40	mA	
Collector Dissipation	PC		1	W	
Junction Temperature	Tj		150	°C	
Storage Temperature	Tstg		-55 to +150	°C	

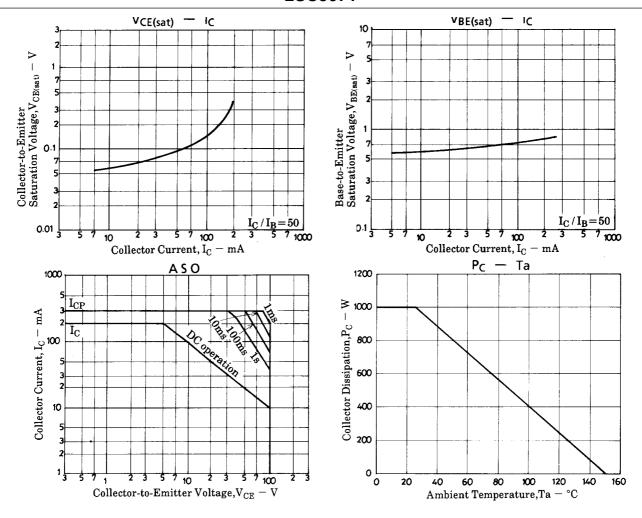
#### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	l Ollit
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =80V, I <sub>E</sub> =0			0.1	μΑ
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =10V, I <sub>C</sub> =0			0.1	μΑ
DC Current Gain	h <sub>FE</sub> 1	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	500		2000	
	h <sub>FE</sub> 2	V <sub>CE</sub> =5V, I <sub>C</sub> =100mA	400			
Gain-Bandwidth Product	fT	V <sub>CE</sub> =10V, I <sub>C</sub> =10mA		150		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, f=1MHz		6.5		pF

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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	VCE(sat)	I <sub>C</sub> =100mA, I <sub>B</sub> =2mA		0.15	0.5	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =2mA		0.85	1.2	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =10μA, I <sub>E</sub> =0	120			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	100			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I <sub>E</sub> =10μA, I <sub>C</sub> =0	15			V





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