

# 2SC3070

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

## **Applications**

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

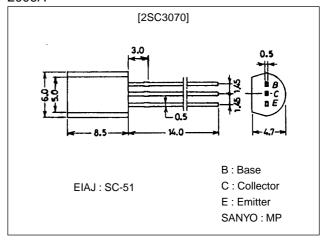
#### **Features**

- · High DC current gain (h<sub>FE</sub>=800 to 3200).
- · Large current capacity (I<sub>C</sub>=1.2A).
- $\cdot$  Low collector-to-emitter saturation voltage (V\_{CE(sat)} = 0.5 V max).
- · High V<sub>EBO</sub> (V<sub>EBO</sub>≥15V).

## **Package Dimensions**

unit:mm

#### 2006A



## **Specifications**

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

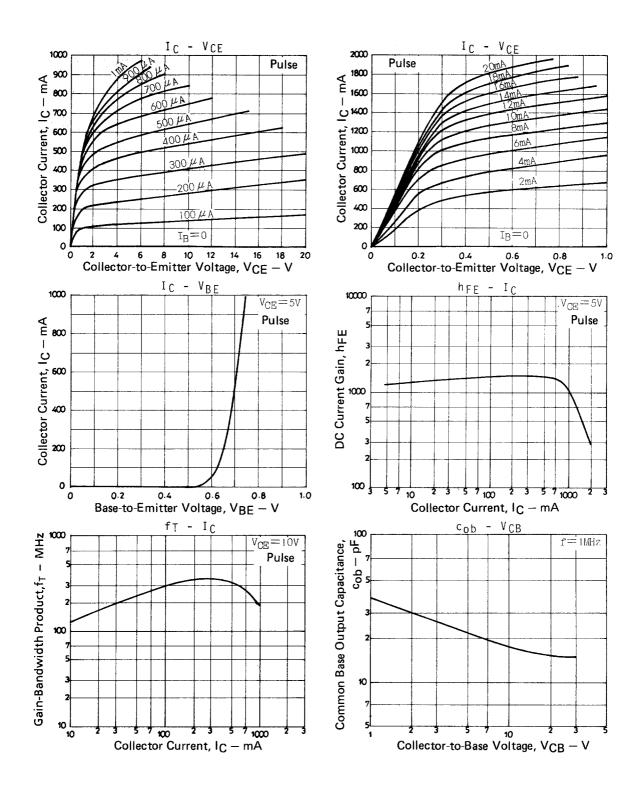
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CBO</sub>		30	V
Collector-to-Emitter Voltage	VCEO		25	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		15	V
Collector Current	IC		1.2	Α
Collector Current (Pulse)	I <sub>CP</sub>		2	Α
Base Current	IB		240	mA
Collector Dissipation	PC		1	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

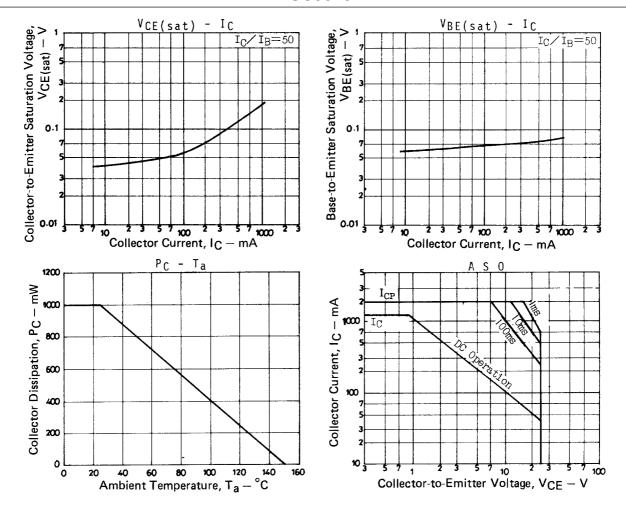
#### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	l Ollit
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =20V, 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> =500mA	800	1500	3200	
	h <sub>FE</sub> 2	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	600			
Gain-Bandwidth Product	fT	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA		220		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, f=1MHz		17		pF

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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	01111
Collector-to-Emitter Saturation Voltage	VCE(sat)	I <sub>C</sub> =500mA, I <sub>B</sub> =10mA		0.12	0.5	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =10mA		0.85	1.2	V
Collector-to-Base Breakdown Voltage	V <sub>(BR)</sub> CBO	I <sub>C</sub> =10μA, I <sub>E</sub> =0	30			V
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)</sub> CEO	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	25			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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