NPN Epitaxial Planar Silicon Transistor

2SC5070



Low-Frequency General-Purpose Amplifier, Driver Applications

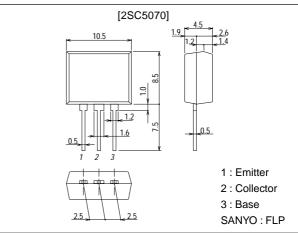
Features

- · High current capacity.
- \cdot Adoption of MBIT process.
- · High DC current gain.
- \cdot Low collector-to-emitter saturation voltage.
- \cdot High V_{EBO}.

Package Dimensions

unit:mm

2084A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		30	V
Collector-to-Emitter Voltage	VCEO		25	V
Emitter-to-Base Voltage	V _{EBO}		15	V
Collector Current	ΙC		2	Α
Collector Current (Pulse)	ICP		4	Α
Base Current	Ι _Β		0.4	Α
Collector Dissipation	PC		1.5	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

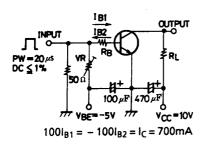
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Onit
Collector Cutoff Current	ICBO	V _{CB} =20V, I _E =0			100	nA
Emitter Cutoff Current	IEBO	V _{EB} =10V, I _C =0			100	nA
DC Current Gain	h _{FE} 1	$V_{CE}=5V, I_{C}=500$ mA	800	1500	3200	
	h _{FE} 2	V _{CE} =5V, I _C =1A	600			
Gain-Bandwidth Product	fT	V _{CE} =10V, I _C =50mA		260		MHz
Output Capacitance	Cob	V _{CB} =10V, f=1MHz		27		pF

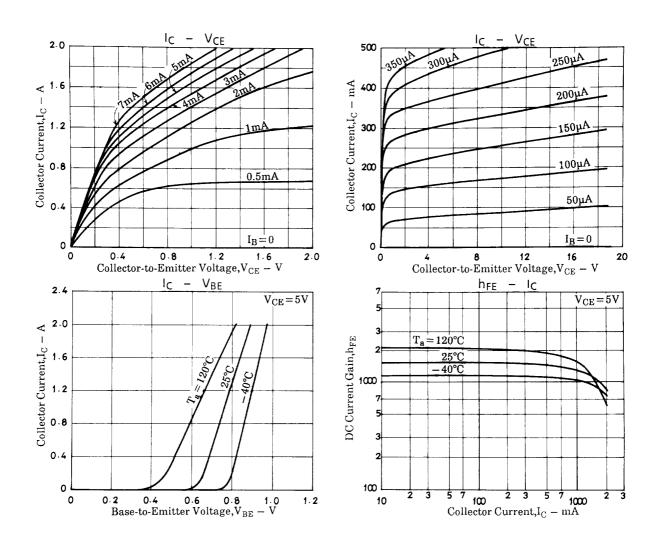
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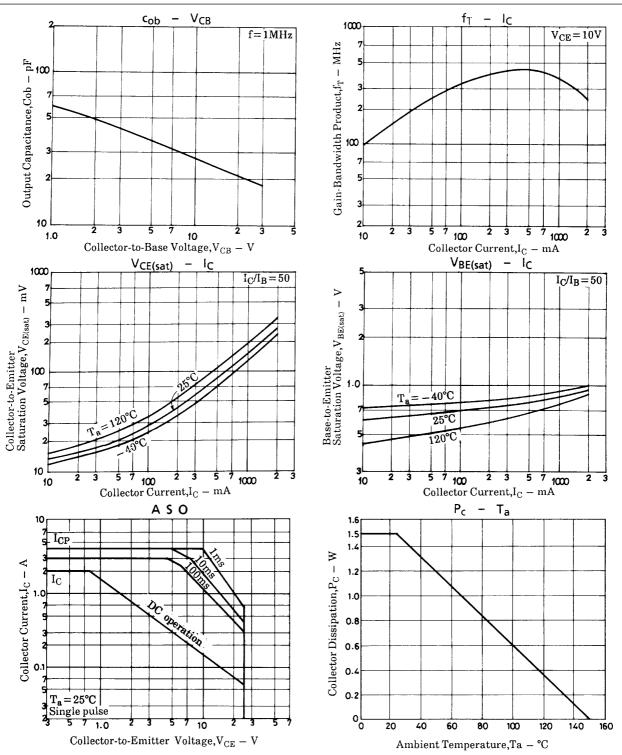
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	VCE(sat)	I _C =1A, I _B =20mA		0.15	0.5	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =1A, I _B =20mA		0.85	1.2	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I _C =10μA, I _E =0	30			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =1mA, R _{BE} =∞	25			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I _E =10μA, I _C =0	15			V
Turn-ON Time	ton	See specified Test Circuit		0.14		μs
Strage Time	^t stg	See specified Test Circuit		1.35		μs
Fall Time	t _f	See specified Test Circuit		0.1		μs

Switching Time Test Circuit







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