

30C01M

Low-Frequency General-Purpose Amplifier Applications

Applications

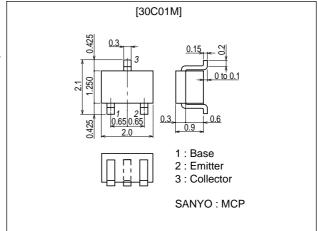
· Low-frequency Amplifier, muting circuit.

Features

- · Large current capacitance.
- Low collector-to-emitter saturation voltage (resistance). RCE(sat) typ= 0.70Ω [IC=0.4A, IB=20mA].
- Ultrasmall package facilitates miniaturization in end products.
- · Small ON-resistance (Ron).

Package Dimensions

unit : mm 2059B



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		40	V
Collector-to-Emitter Voltage	VCEO		30	V
Emitter-to-Base Voltage	VEBO		5	V
Collector Current	IC		400	mA
Collector Current (Pulse)	ICP		800	mA
Collector Dissipation	PC	Mounted on a glass epoxy board (20X30X1.6mm)	300	mW
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} =30V, I _E =0			0.1	μΑ
Emitter Cutoff Current	IEBO	VEB=4V, IC=0			0.1	μА
DC Current Gain	hFE	V _{CE} =2V, I _C =10mA	300		800	
Gain-Bandwidth Product	fΤ	V _{CE} =10V, I _C =50mA		380		MHz
Output Capacitance	Cob	V _{CB} =10V, f=1MHz		2.4		pF
Collector-to-Emitter Saturation Voltage	VCE(sat)	IC=100mA, IB=5mA		100	200	mV
Base-to-Emitter Saturation Voltage	V _{BE} (sat)	I _C =100mA, I _B =5mA		0.9	1.2	V

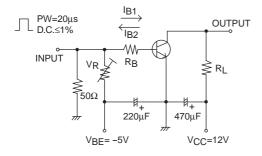
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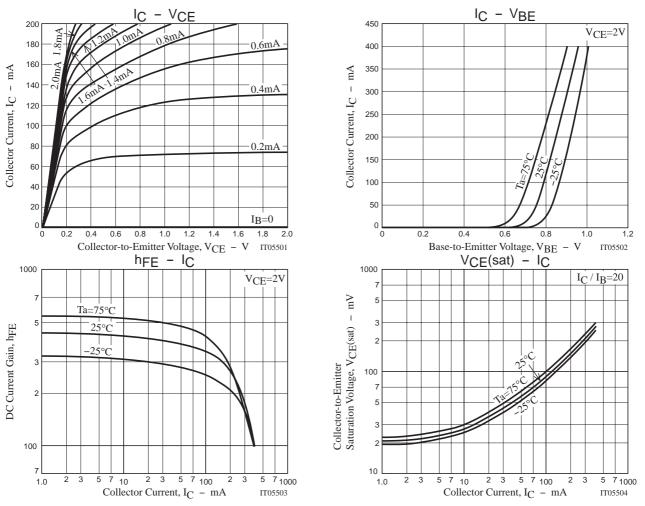
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Collector-to-Base Breakdown Voltage	V(BR)CBO	I _C =10μA, I _E =0	40			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =1mA, R _{BE} =∞	30			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	IE=10μA, IC=0	5			V
Turn-ON Time	ton	See specified Test Circuit.		42		ns
Storage Time	t _{stg}	See specified Test Circuit.		135		ns
Fall Time	tf	See specified Test Circuit.		90		ns

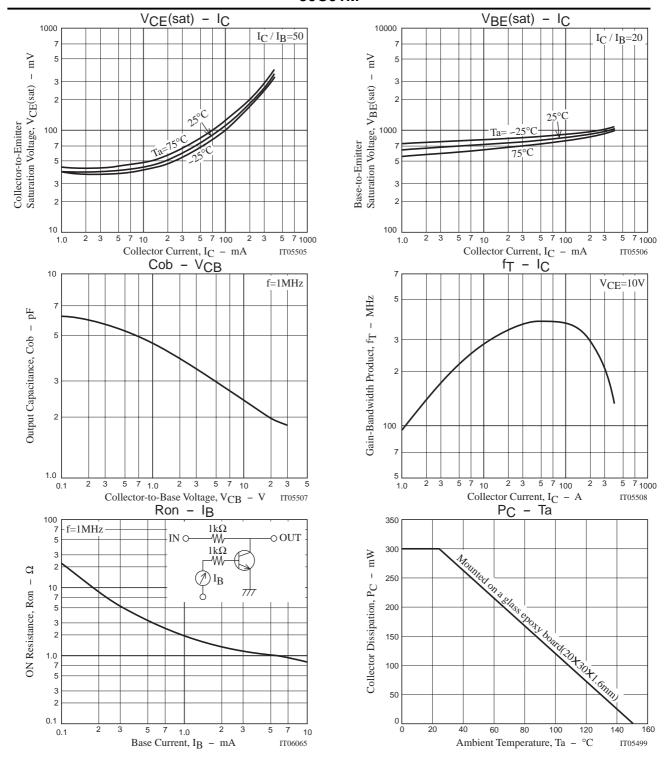
Switching Time Test Circuit



 $I_{C}=20I_{B1}=-20I_{B2}=300mA$



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