



SANYO Semiconductors

DATA SHEET

NPN Epitaxial Planar Silicon Transistor

EC4201KF — Low-Frequency General-Purpose Amplifier Applications

Applications

- Low-frequency Amplifier, muting circuit.

Features

- Large current capacitance.
- Mounting height: 0.4mm.
- Small ON-resistance (Ron).

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		20	V
Collector-to-Emitter Voltage	V _{CEO}		15	V
Emitter-to-Base Voltage	V _{EBO}		5	V
Collector Current	I _C		500	mA
Collector Current (Pulse)	I _{CP}		1.0	A
Collector Dissipation	P _C	Mounted on a glass-epoxy printed circuit board	0.4	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CB0}	V _{CB} =15V, I _E =0A			0.1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =4V, I _C =0A			0.1	μA
DC Current Gain	h _{FE}	V _{CE} =2V, I _C =10mA	300		800	
Gain-Bandwidth Product	f _T	V _{CE} =2V, I _C =50mA		330		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		3.2		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =200mA, I _B =10mA		150	300	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =200mA, I _B =10mA		0.9	1.2	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =10μA, I _E =0A	20			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =1mA, R _{BE} =∞	15			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =10μA, I _C =0A	5			V

Marking : JA

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SANYO Electric Co., Ltd. Semiconductor Company

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

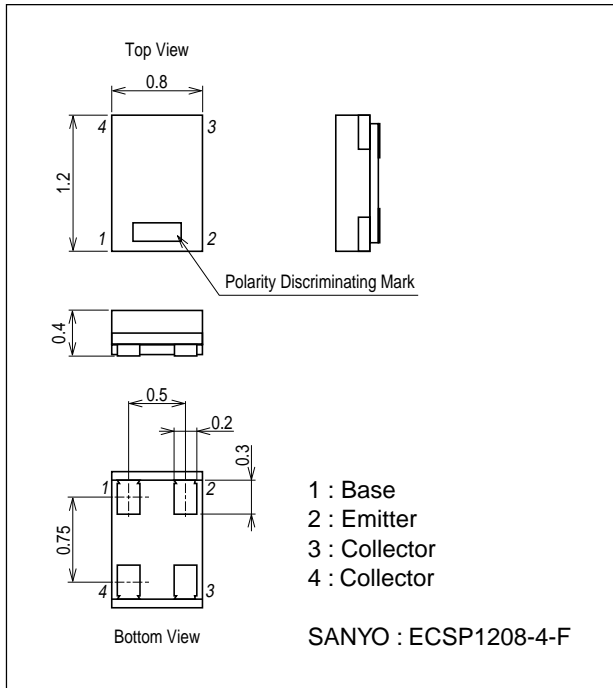
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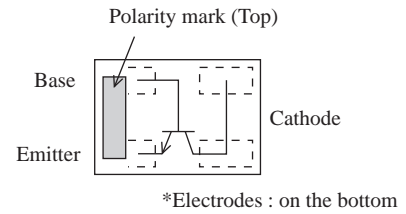
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Time	t_{on}	See specified Test Circuit.		30		ns
Storage Time	t_{stg}	See specified Test Circuit.		77		ns
Fall Time	t_f	See specified Test Circuit.		40		ns

Package Dimensions

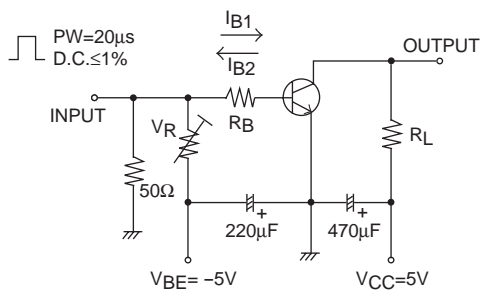
unit : mm
7043-003



Electrical Connection (Top view)

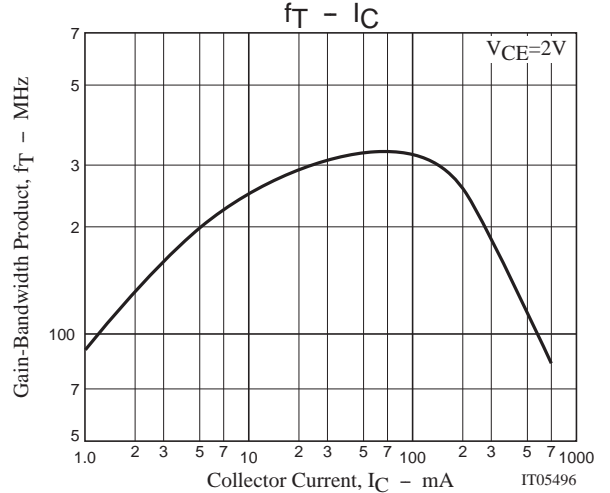
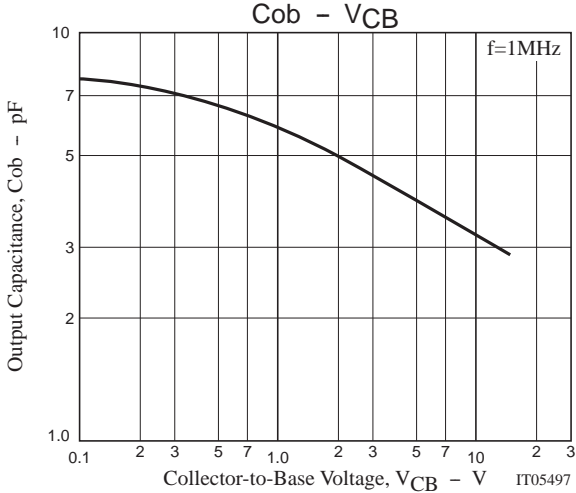
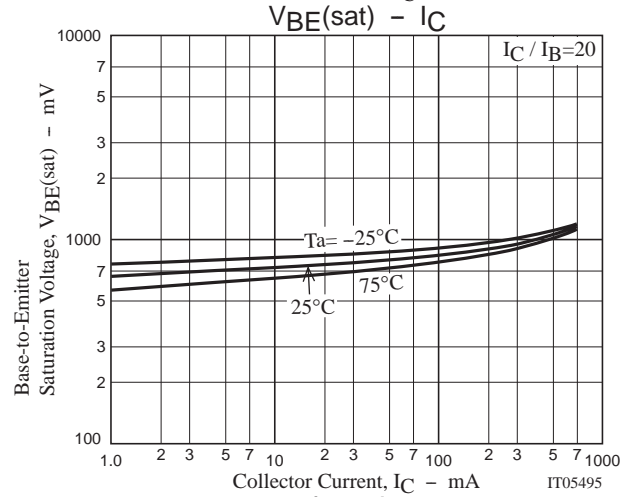
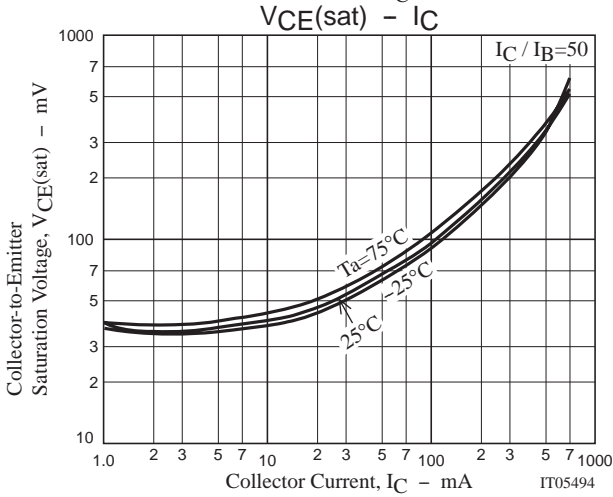
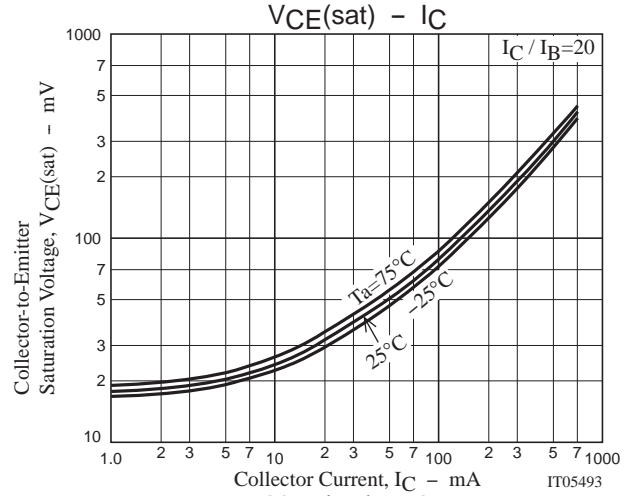
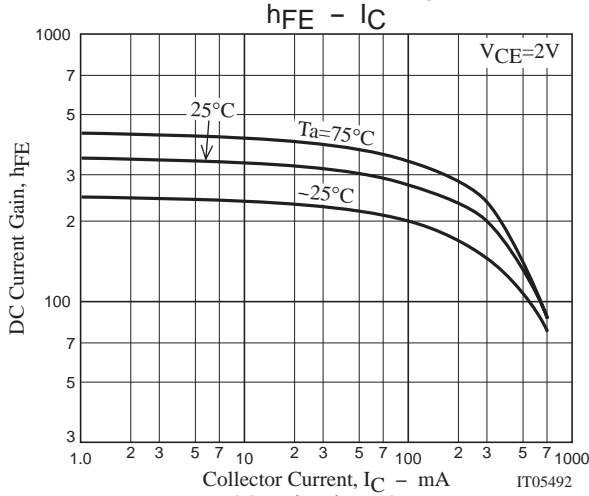
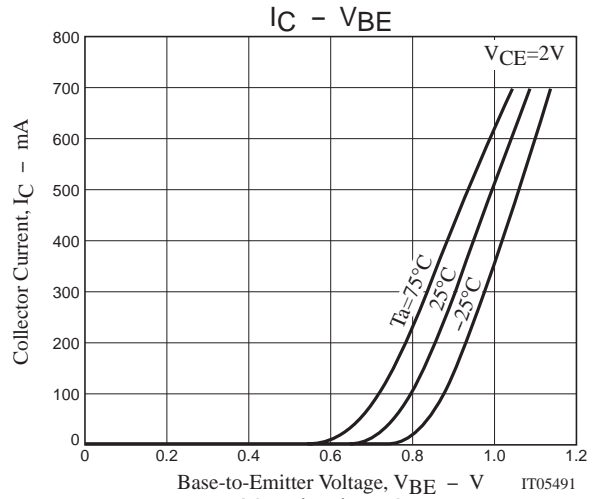
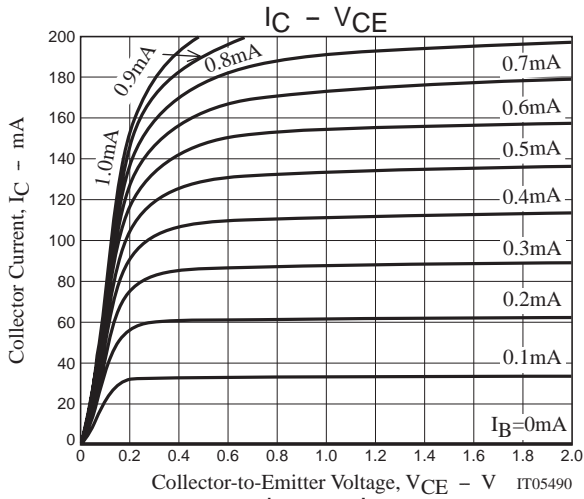


Switching Time Test Circuit

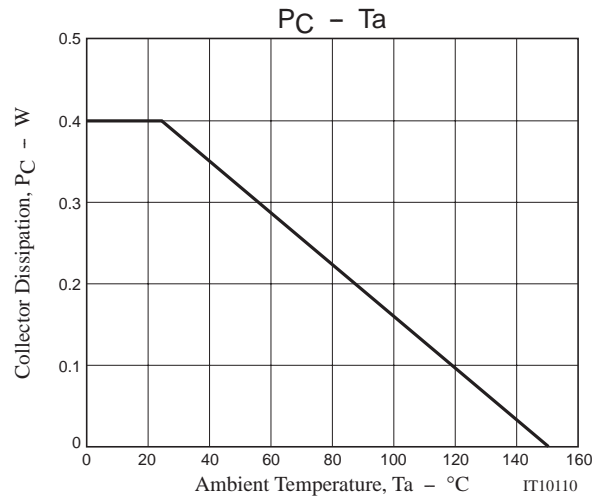
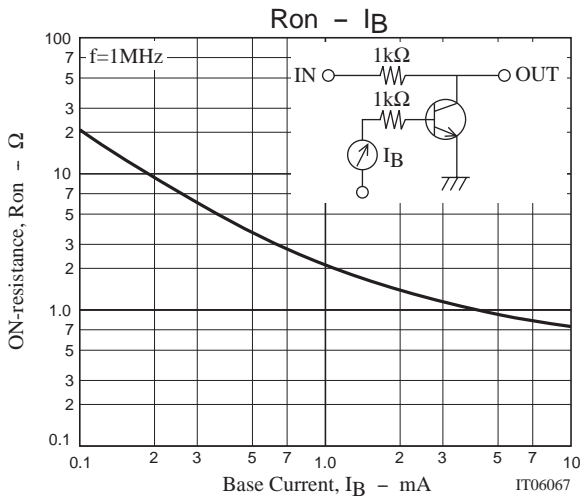


$$I_C = 20I_{B1} = -20I_{B2} = 500mA$$

EC4201KF



EC4201KF



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