

**15C02SS**

Low-Frequency General-Purpose Amplifier Applications

Applications

- Low-frequency amplifier, high-speed switching, small motor drive.

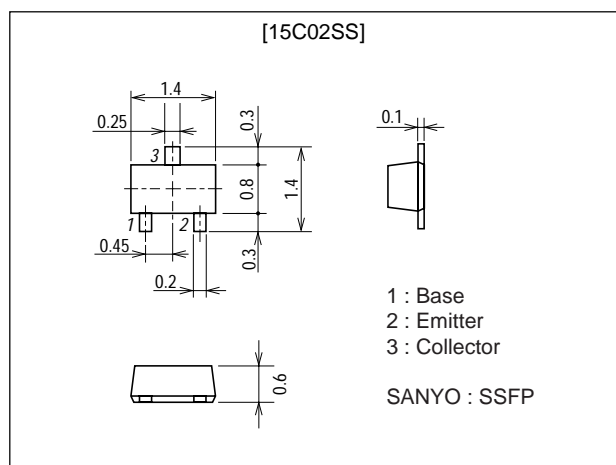
Features

- Large current capacitance.
- Low collector-to-emitter saturation voltage.
- Ultrasmall package facilitates miniaturization in end products.

Package Dimensions

unit : mm

2159



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		0.8	A
Collector Current (Pulse)	I_{CP}		1.6	A
Collector Dissipation	P_C	Mounted on a glass epoxy board (20X30X1.6mm)	200	mW
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}	$V_{CB}=12V, I_E=0$			100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0$			100	nA
DC Current Gain	h_{FE}	$V_{CE}=2V, I_C=50mA$	300		800	
Gain-Bandwidth Product	f_T	$V_{CE}=2V, I_C=50mA$		440		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		4		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=400mA, I_B=20mA$		140	280	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=400mA, I_B=20mA$		0.9	1.2	V

Marking : YK

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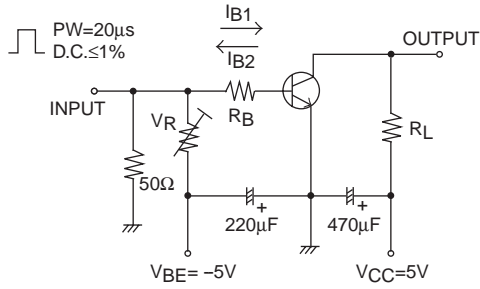
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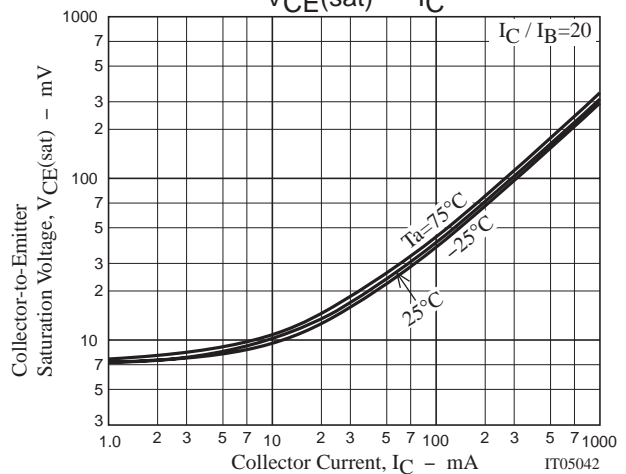
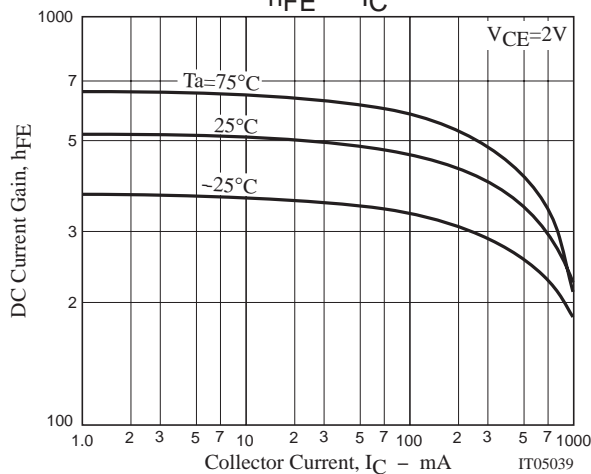
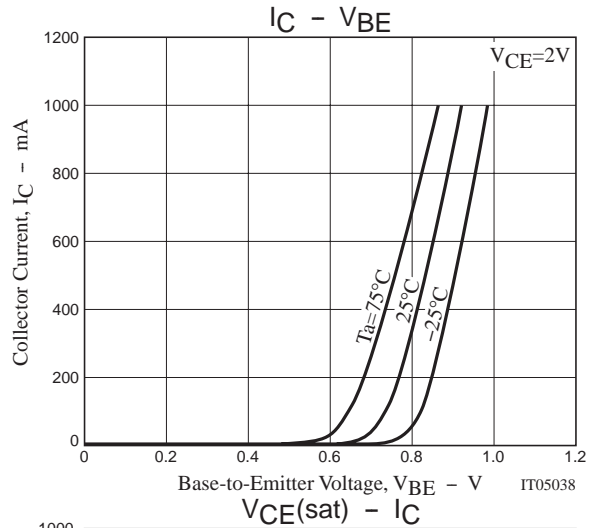
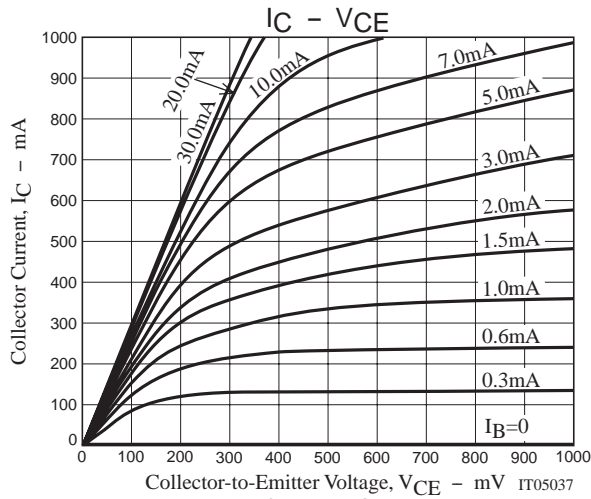
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	20			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	15			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	5			V
Turn-ON Delay Time	t_{on}	See specified Test Circuit.		30		ns
Storage Time	t_{stg}	See specified Test Circuit.		165		ns
Turn-OFF Delay Time	t_f	See specified Test Circuit.		25		ns

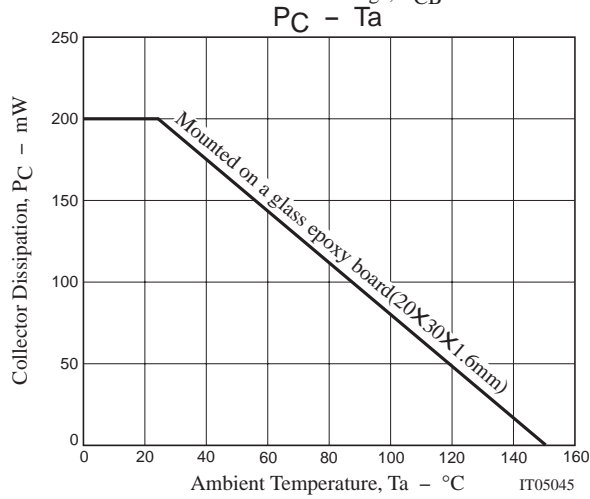
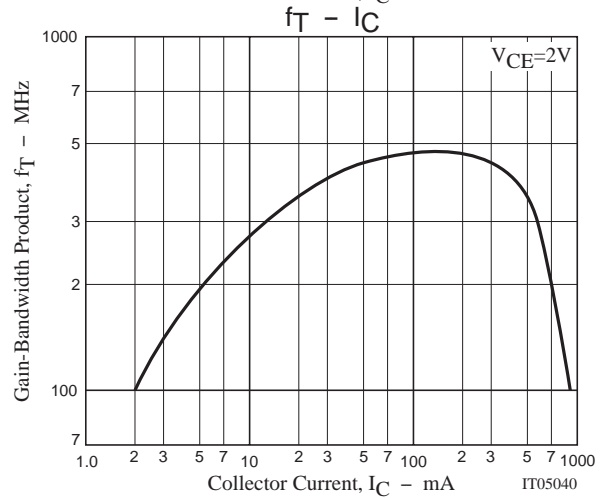
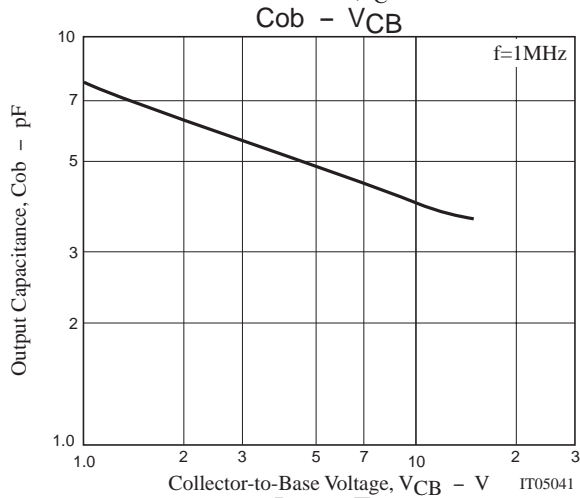
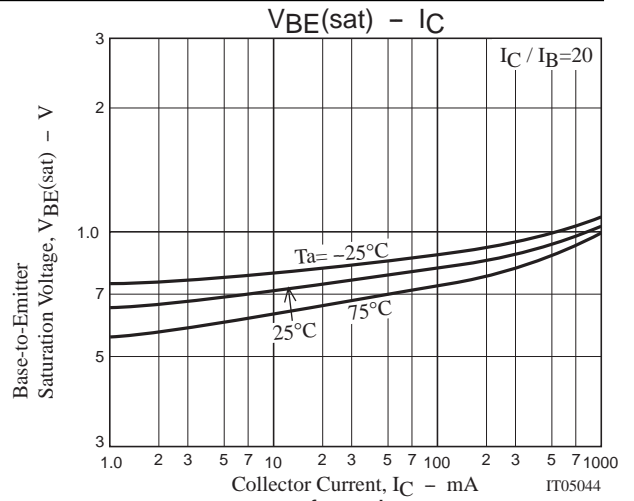
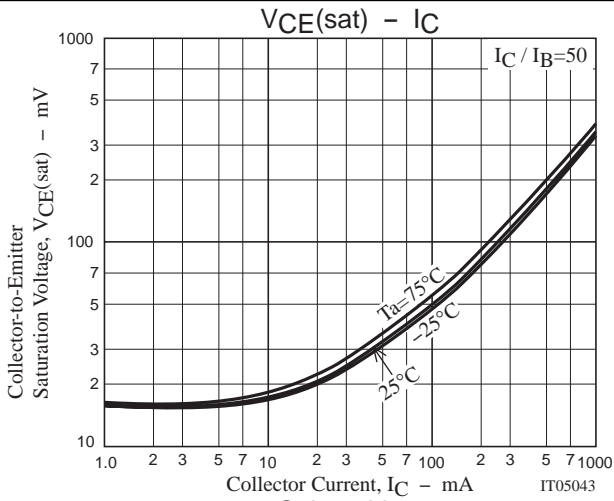
Switching Time Test Circuit



$$I_C=20I_{B1} = -20I_{B2}=400mA$$



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