

**30A01SS**

Low-Frequency General-Purpose Amplifier Applications

Applications

- Low-frequency power amplifier, muting circuit.

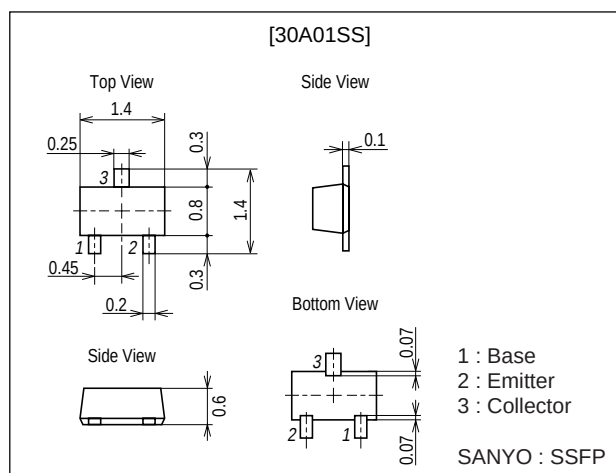
Features

- Large current capacity.
- Low collector-to-emitter saturation voltage(resistance).
 $R_{CE(sat)} \text{ typ} = 0.67\Omega [I_C = 0.3A, I_B = 15mA]$.
- Ultrasmall and thin flat lead package
(1.4mmX0.8mmX0.6mm).
- Small ON-resistance (Ron).

Package Dimensions

unit : mm

2159A



Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		-30	V
Collector-to-Emitter Voltage	V_{CEO}		-30	V
Emitter-to-Base Voltage	V_{EBO}		-5	V
Collector Current	I_C		-300	mA
Collector Current (Pulse)	I_{CP}		-600	mA
Collector Dissipation	P_C	Mounted on a glass epoxy board (20X30X1.6mm)	200	mW
Junction Temperature	T_J		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB} = -30V, I_E = 0$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -4V, I_C = 0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = -2V, I_C = -10mA$	200		500	
Gain-Bandwidth Product	f_T	$V_{CE} = -10V, I_C = -50mA$		520		MHz
Output Capacitance	C_{ob}	$V_{CB} = -10V, f = 1MHz$		3		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -5mA$		-110	-220	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -100mA, I_B = -5mA$		-0.9	-1.2	V

Marking : XQ

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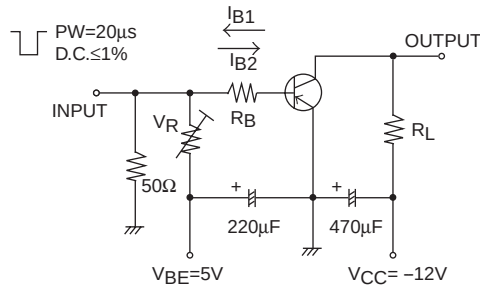
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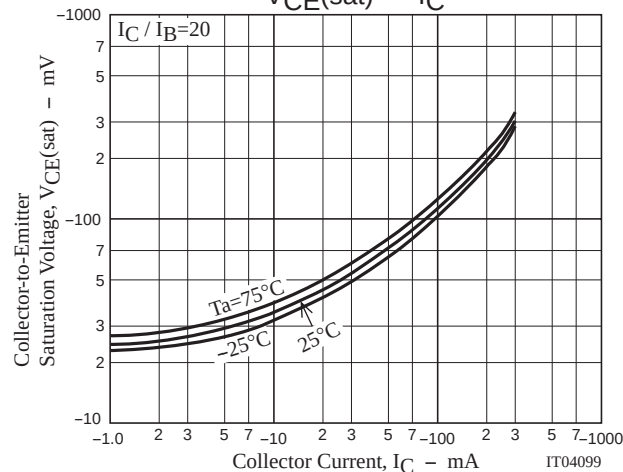
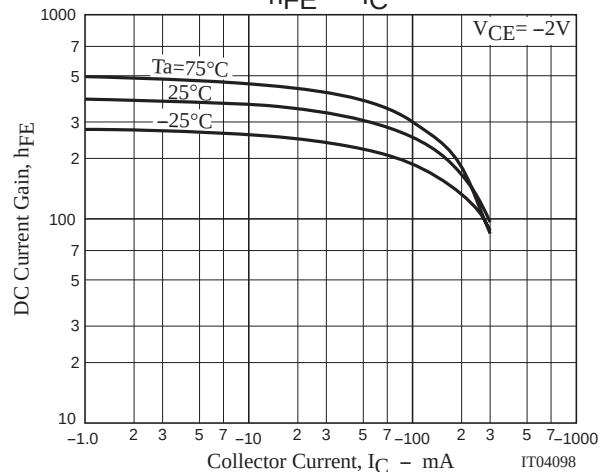
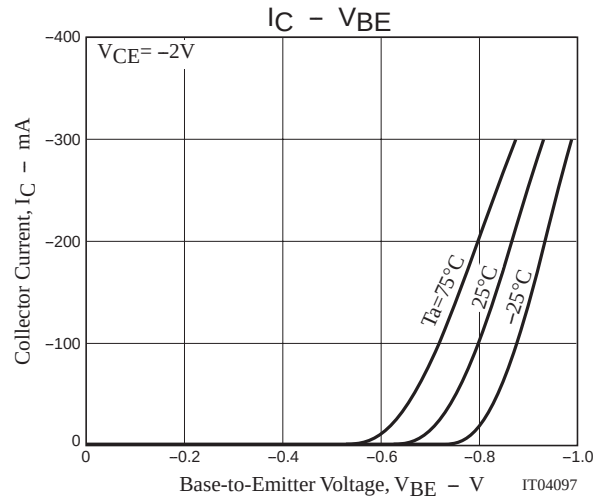
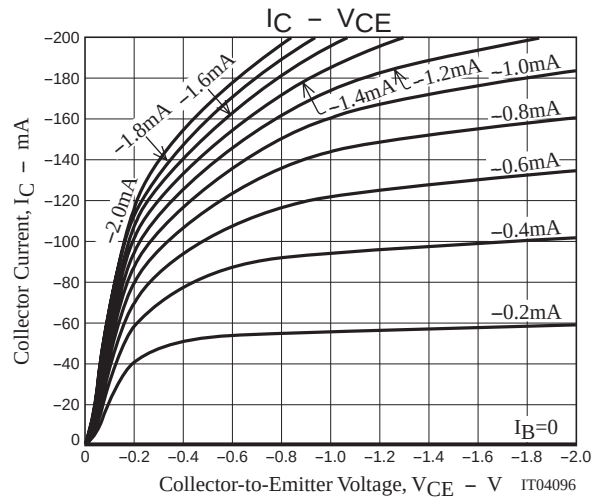
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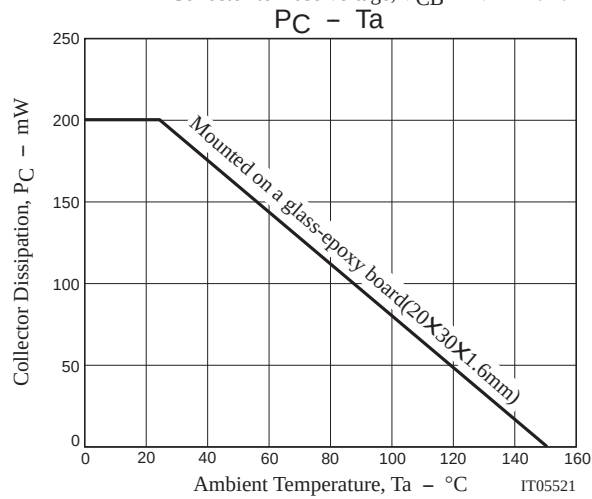
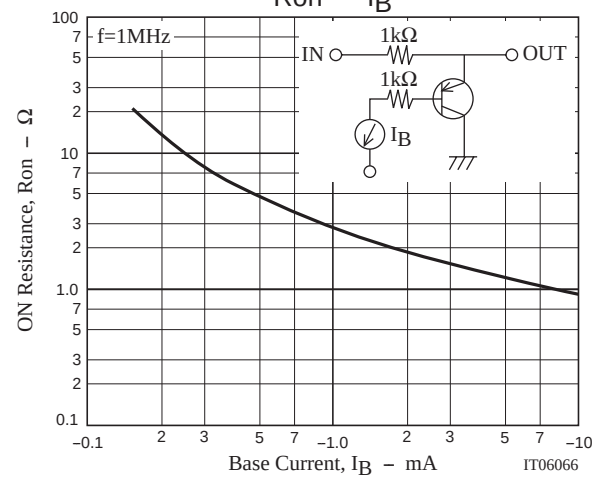
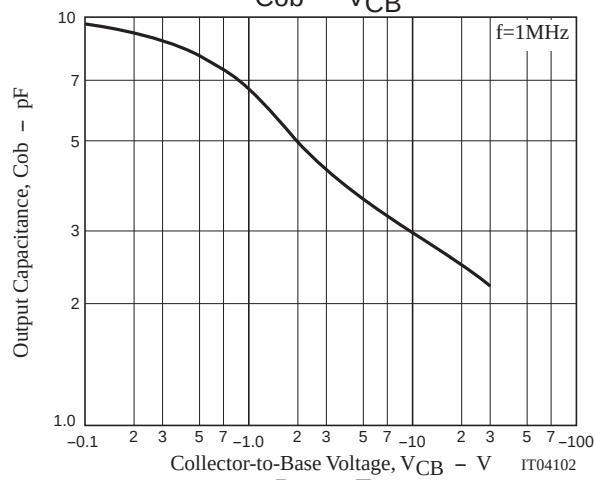
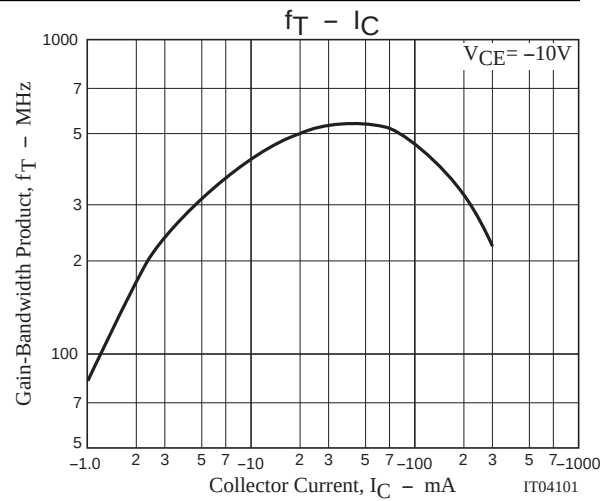
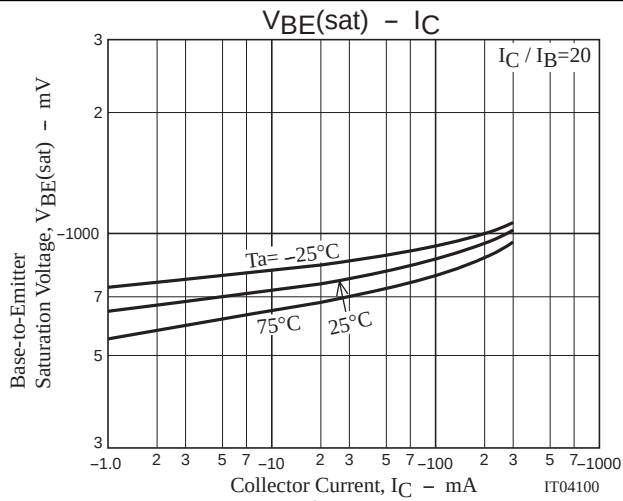
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-30			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
Turn-ON Time	t_{on}	See specified Test Circuit.		39		ns
Storage Time	t_{stg}	See specified Test Circuit.		200		ns
Fall Time	t_f	See specified Test Circuit.		48		ns

Switching Time Test Circuit



$$I_C = 20I_{B1} = -20I_{B2} = -100mA$$





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