

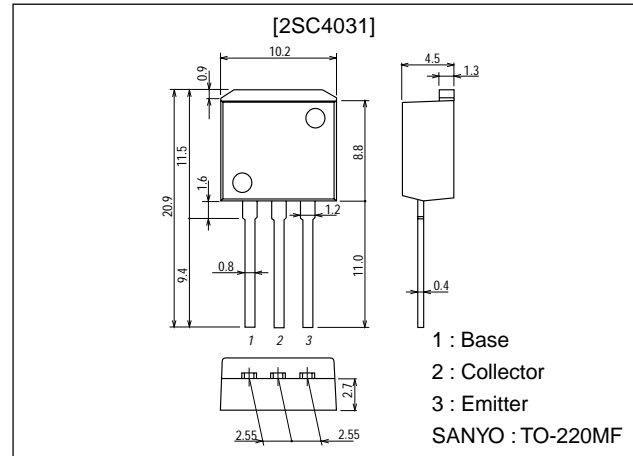
**2SC4031****900V/20mA Switching Applications****Features**

- High breakdown voltage (V_{CE0} min=900V).
- Small Output Capacitance (C_{ob} typ=1.6pF).
- Wide ASO (adoption of MBIT process).
- High reliability (adoption of HVP process).

Package Dimensions

unit:mm

2049C

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		2000	V
Collector-to-Emitter Voltage	V_{CEO}		900	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		20	mA
Collector Current (Pulse)	I_{CP}		60	mA
Collector Dissipation	P_C		1.65	W
		$T_c=25^\circ\text{C}$	1.2	W
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}	$V_{CB}=900\text{V}, I_E=0$			1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			1	μA
DC Current Gain	h_{FE}	$V_{CE}=5\text{V}, I_C=1\text{mA}$	20	50	120	
Gain-Bandwidth Product	f_T	$V_{CE}=10\text{V}, I_C=1\text{mA}$		6		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2\text{mA}, I_B=400\mu\text{A}$			5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2\text{mA}, I_B=400\mu\text{A}$			2	V

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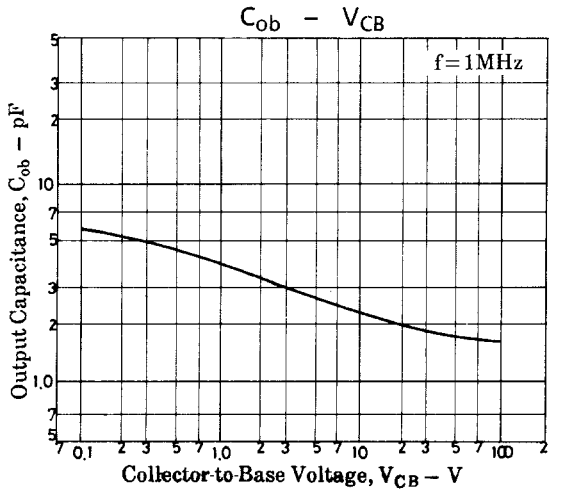
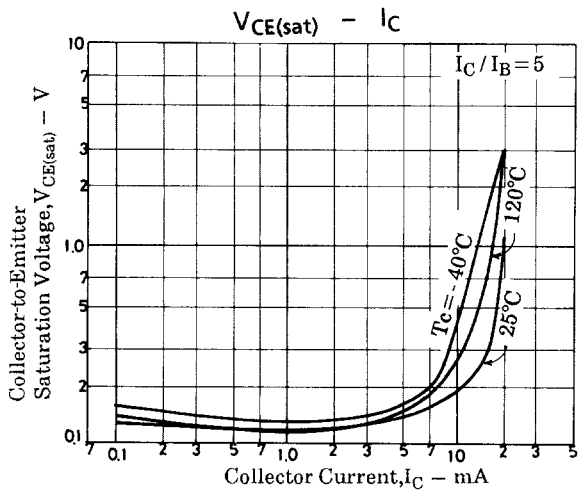
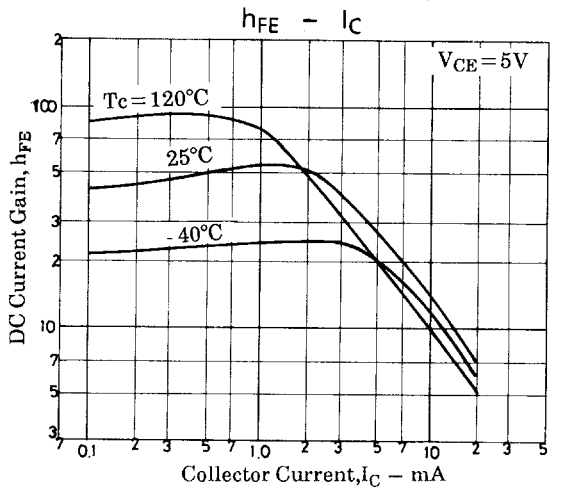
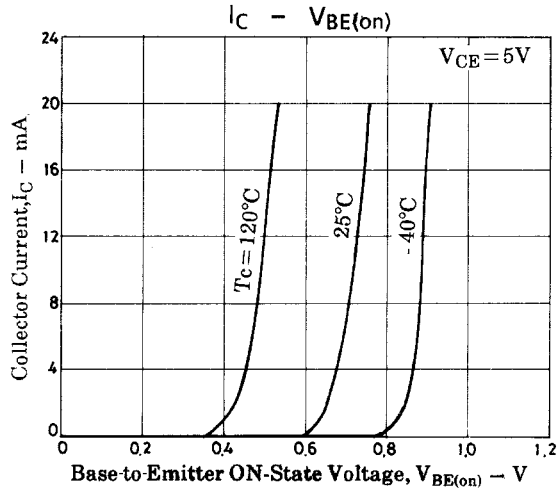
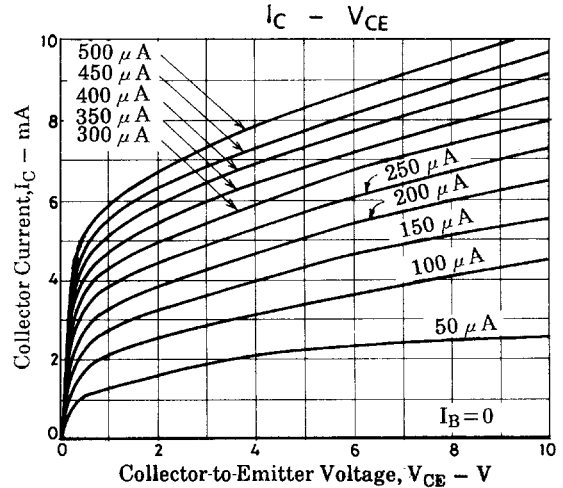
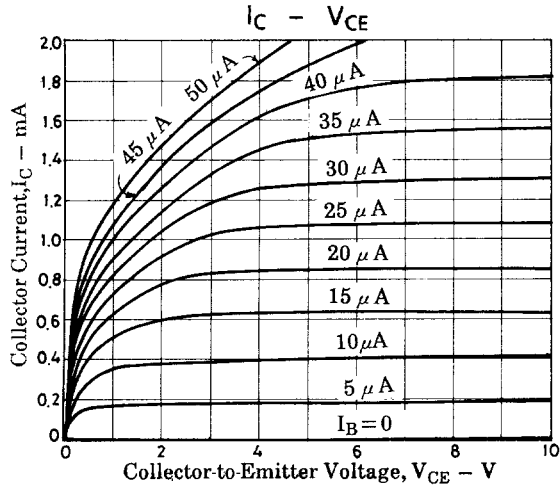
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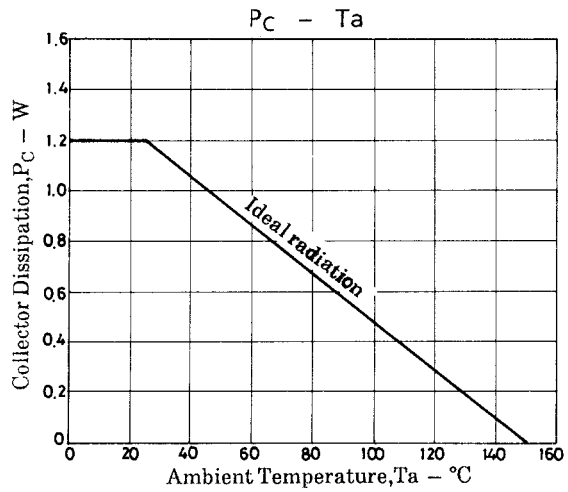
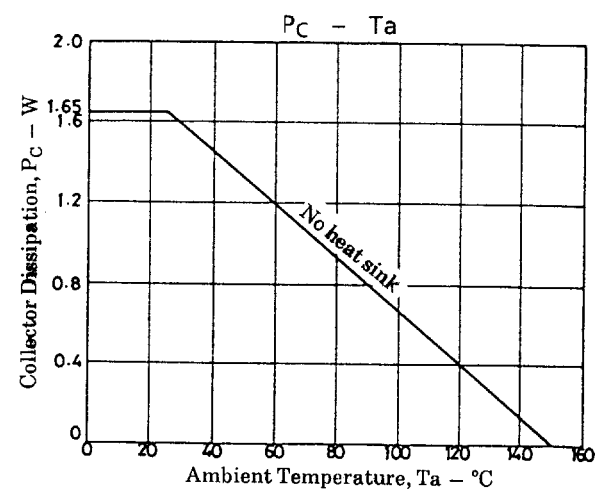
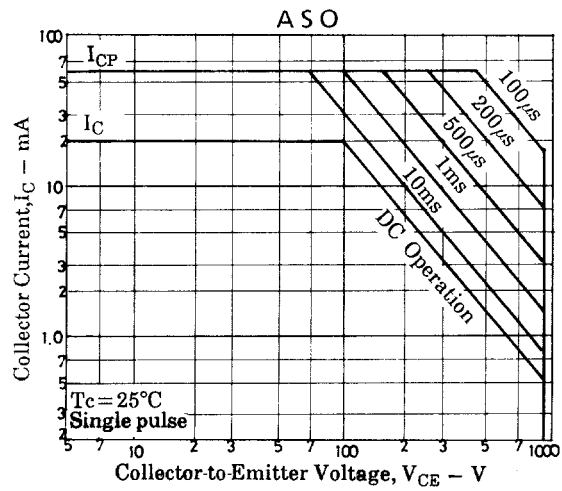
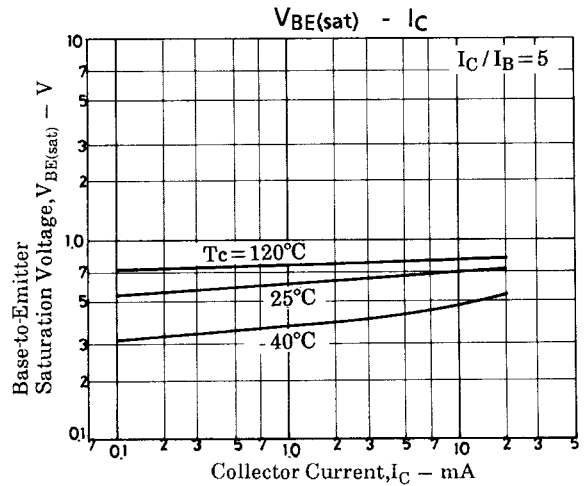
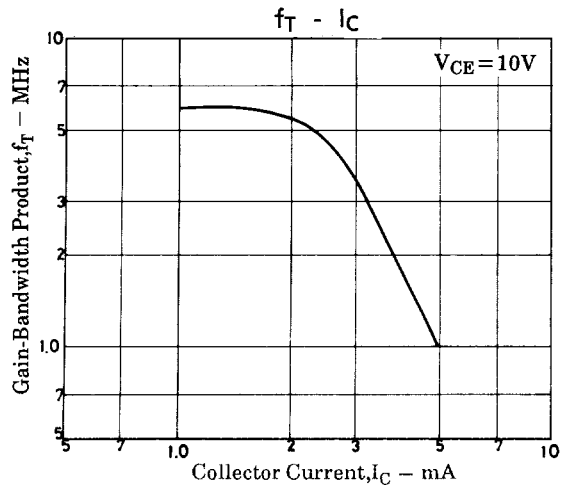
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2SC4031

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	2000			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	900			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	5			V
Output Capacitance	C_{ob}	$V_{CB}=100V, f=1MHz$		1.6		pF



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