

SANYO	No.3686A	2SA1831
	PNP Triple Diffused Planar Silicon Transistor High-Voltage Amp, High-Voltage Switching	

Features

- High breakdown voltage ($V_{CEO \text{ min}} = -800\text{V}$).
- Small c_{ob} ($c_{ob \text{ typ}} = 1.6\text{pF}$).
- High reliability (Adoption of HVP processes).

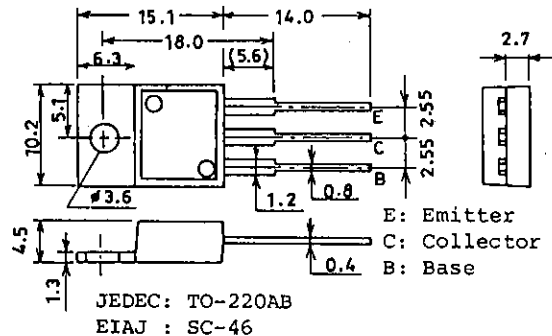
Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

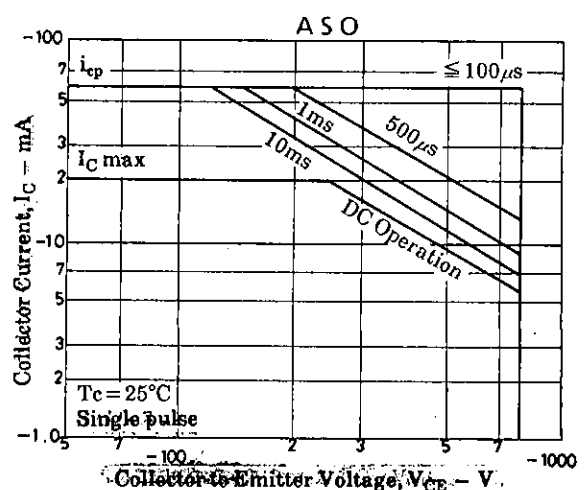
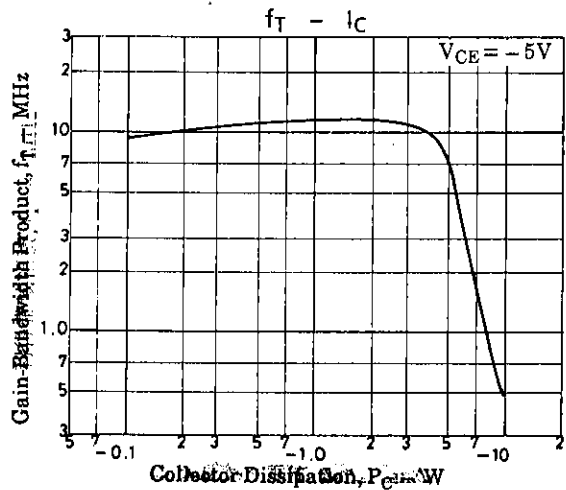
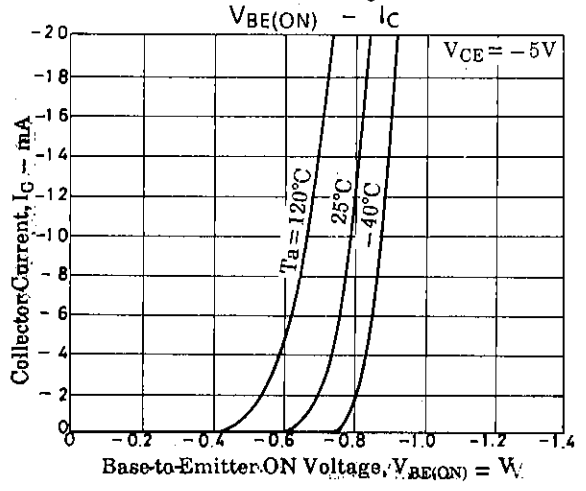
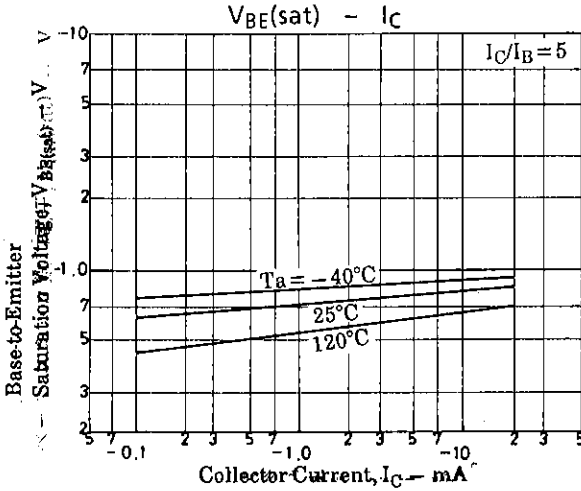
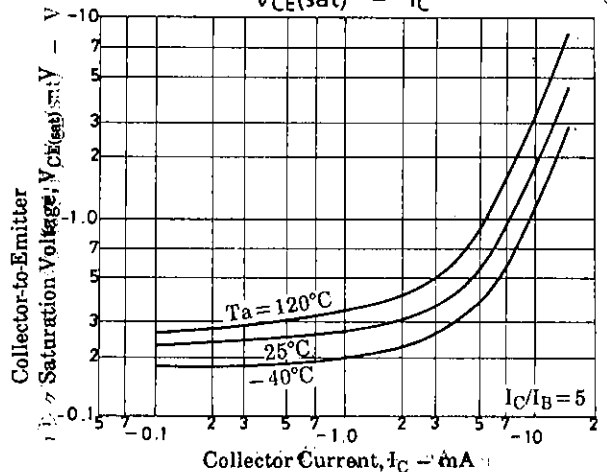
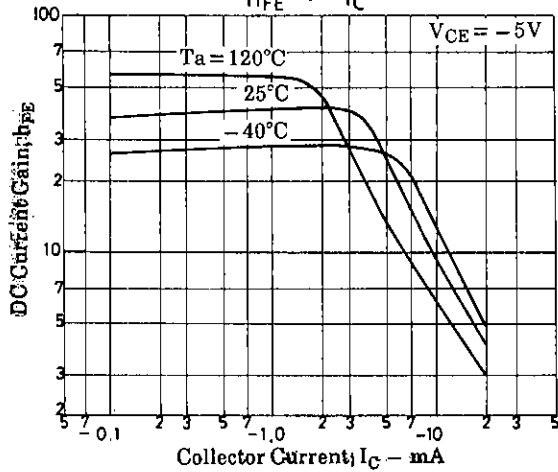
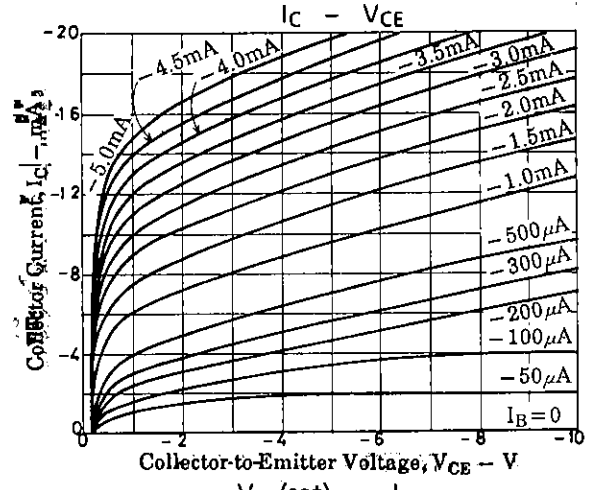
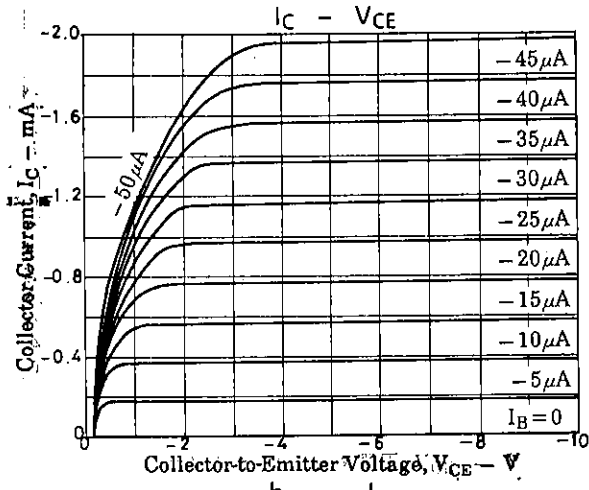
			unit
Collector-to-Base Voltage	V_{CBO}	-800	V
Collector-to-Emitter Voltage	V_{CEO}	-800	V
Emitter-to-Base Voltage	V_{EBO}	-7	V
Collector Current	I_C	-20	mA
Peak Collector Current	i_{cp}	-60	mA
Collector Dissipation	P_C	1.75	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

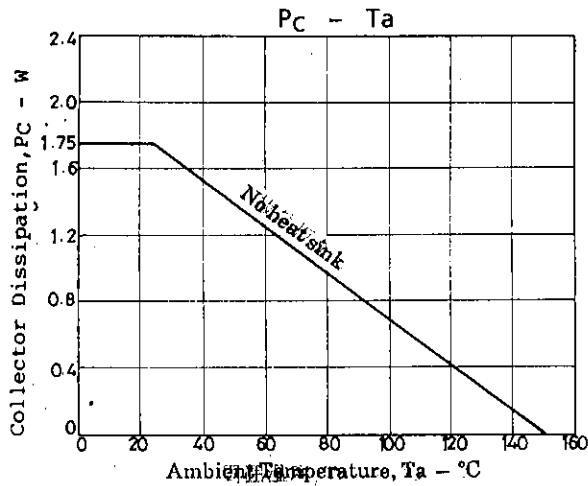
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = -800\text{V}, I_E = 0$			-1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$			-1	μA
DC Current Gain	h_{FE}	$V_{CE} = -5\text{V}, I_C = -2\text{mA}$	20		50	
Gain-Bandwidth Product	f_T	$V_{CE} = -10\text{V}, I_C = -2\text{mA}$		10		MHz
Output Capacitance	c_{ob}	$V_{CB} = -100\text{V}, f = 1\text{MHz}$		1.6		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = -1\text{mA}, I_B = -200\mu\text{A}$			-1	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = -1\text{mA}, I_B = -200\mu\text{A}$			-1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}, I_E = 0$	-800			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, R_{BE} = \infty$	-800			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}, I_C = 0$	-7			V
Thermal Resistance	$R_{th(j-c)}$	Junction - Case			8.3	$^\circ\text{C/W}$

Package Dimensions 2010B
(unit: mm)







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