

SANYO

No.2116B

2SD1806

NPN Epitaxial Planar Silicon Transistor

High-Current Switching Applications

Applications

- Relay control, motor control, switching

Features

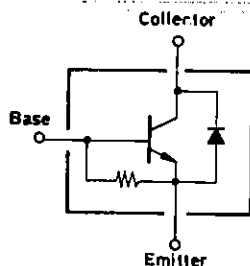
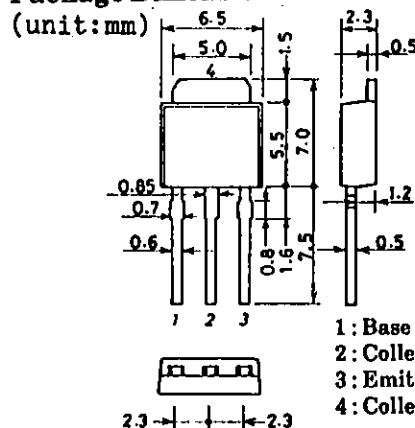
- Low saturation voltage
- On-chip diode between collector and emitter
- Small and slim package permitting 2SD1806-applied sets to be made more compact

Absolute Maximum Ratings at Ta=25°C

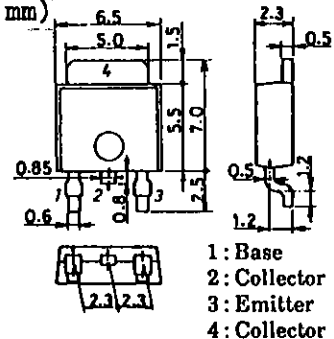
			unit
Collector to Base Voltage	V_{CB0}	40	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current	I_C	2	A
Collector Current(Pulse)	I_{CP}	4	A
Collector Dissipation	P_C	1	W
	$T_c=25^\circ\text{C}$	15	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=20\text{V}, I_E=0$			1.0	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=0.5\text{V}, I_C=0.5\text{A}$	50			
	$h_{FE}(2)$	$V_{CE}=0.5\text{V}, I_C=2\text{A}$	50			
Gain-Bandwidth Product	f_T	$V_{CE}=2\text{V}, I_C=0.5\text{A}$		150		MHz
Output Capacitance	c_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		40		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=2\text{A}, I_B=40\text{mA}$	0.25	0.5		V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=2\text{A}, I_B=40\text{mA}$	0.92	1.5		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	40			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, R_{BE}=\infty$	30			V
Forward Voltage	V_F	$I_F=0.3\text{A}$	0.9	1.2		V
Resistance between Base and Emitter	R_{BE}		1.0			k Ω

Electrical Connection**Package Dimensions 2045B**

SANYO: TP

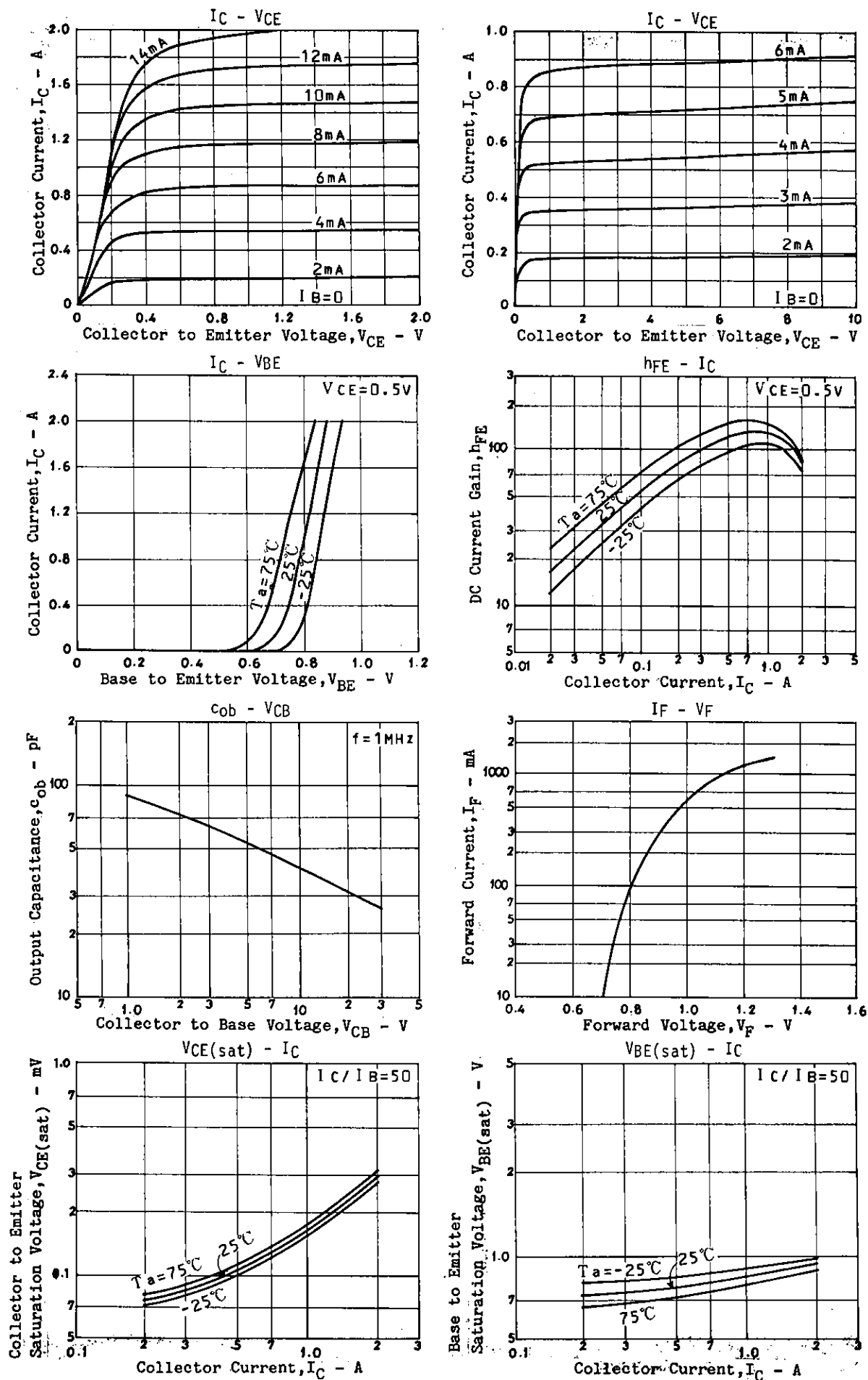
Package Dimensions 2044B

SANYO: TP-FA

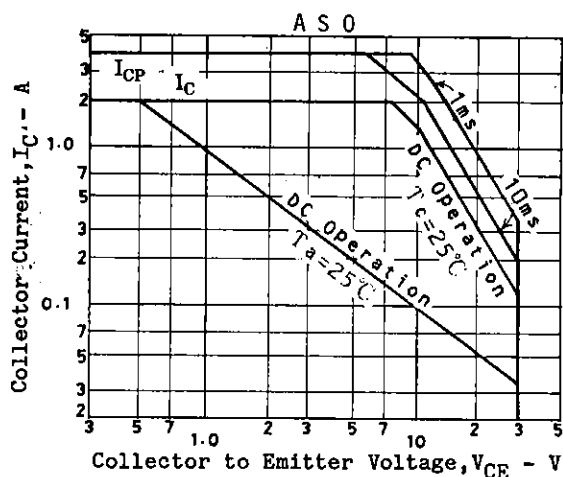
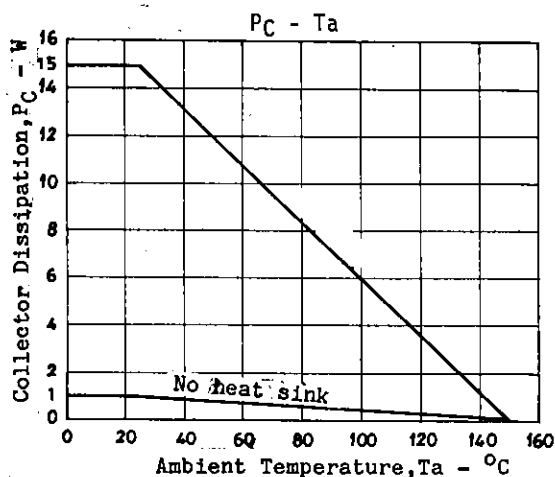
SANYO Electric Co., Ltd. Semiconductor Business Headquarters

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

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