

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

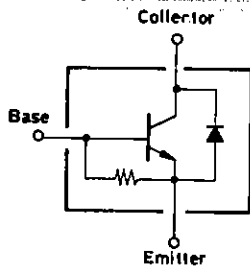
Absolute Maximum Ratings at Ta=25°C

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
		15	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

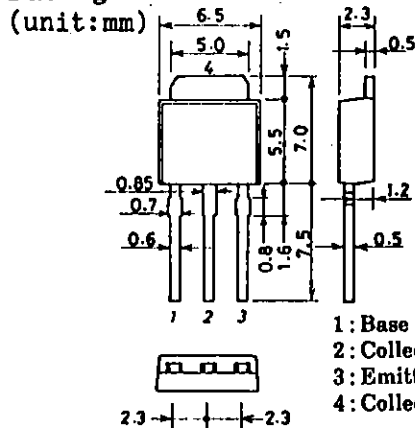
Electrical Characteristics at Ta=25°C

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

Electrical Connection



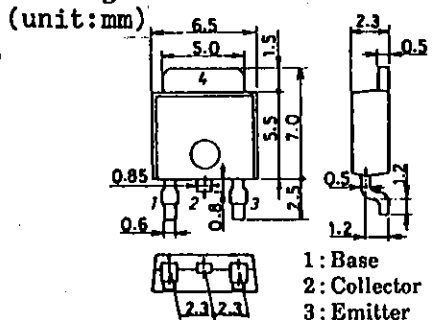
Package Dimensions 2045B



- 1: Base
- 2: Collector
- 3: Emitter
- 4: Collector

SANYO: TP

Package Dimensions 2044B

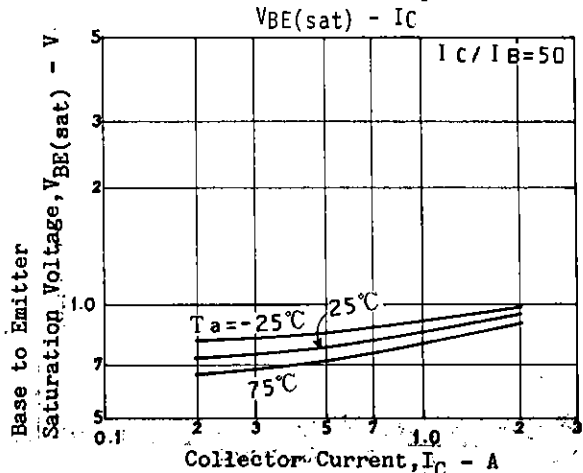
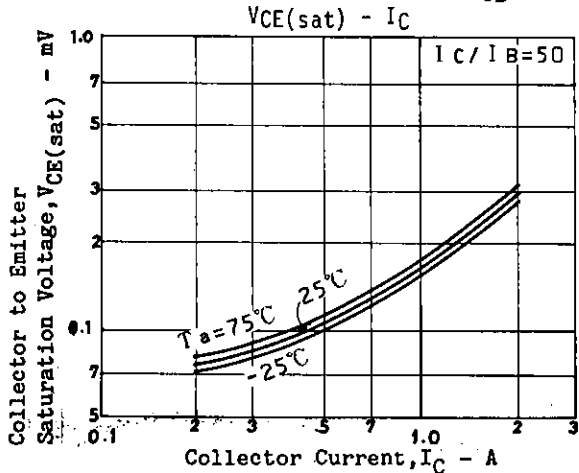
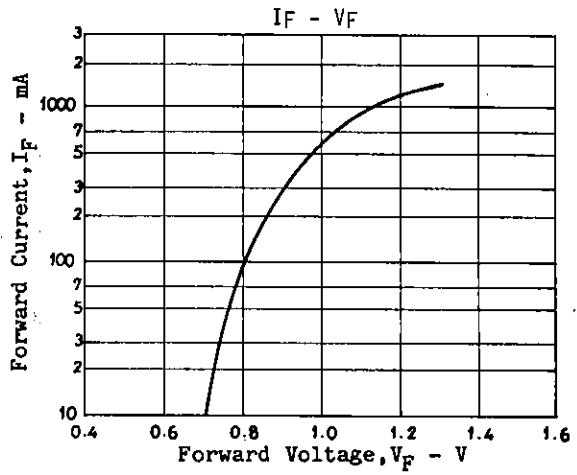
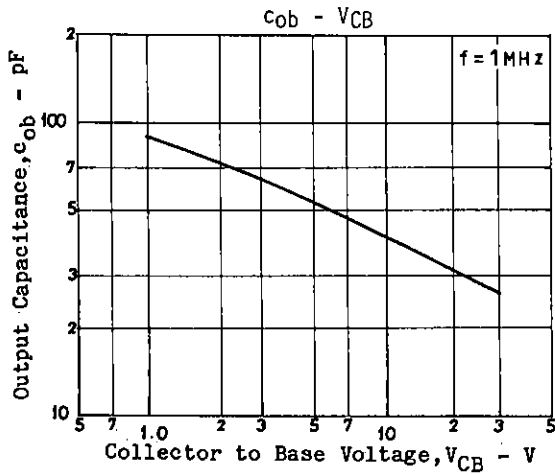
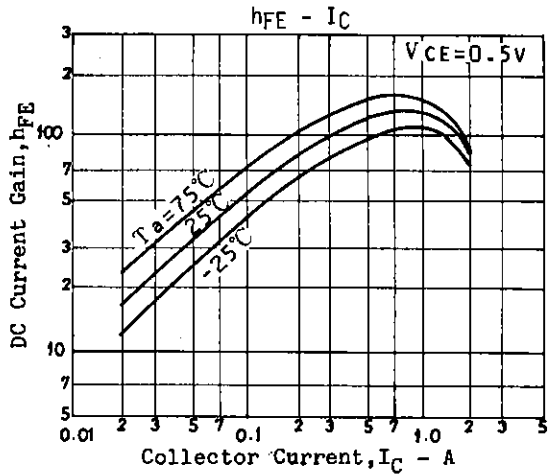
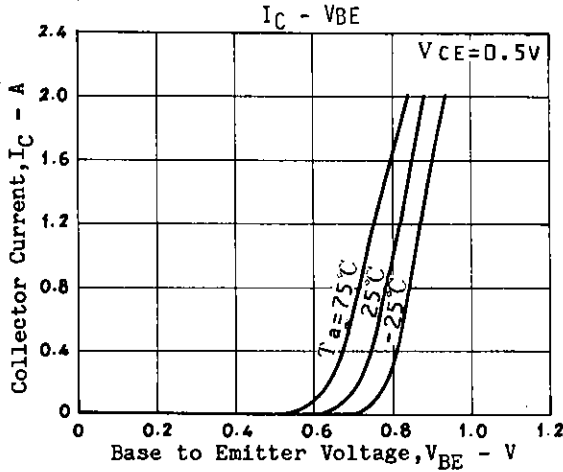
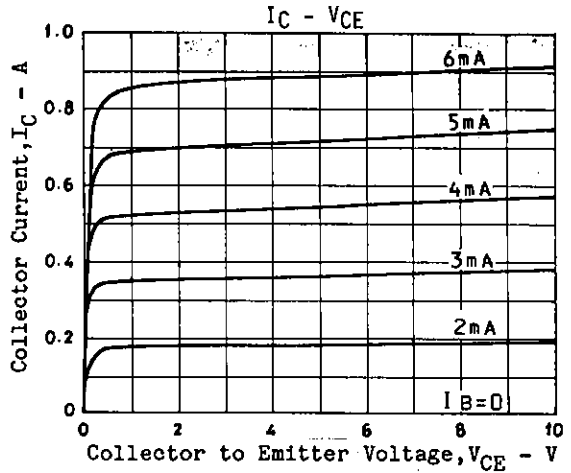
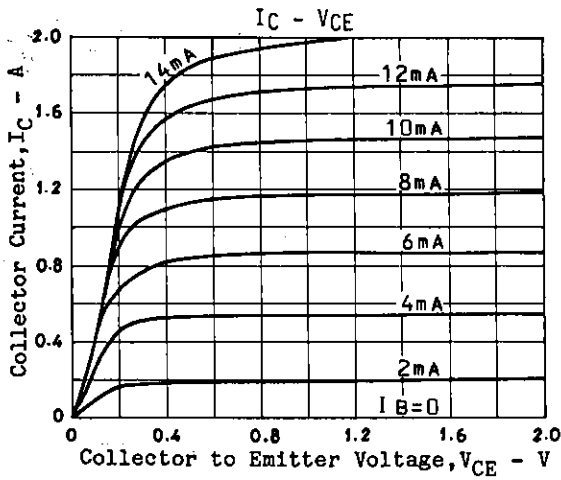


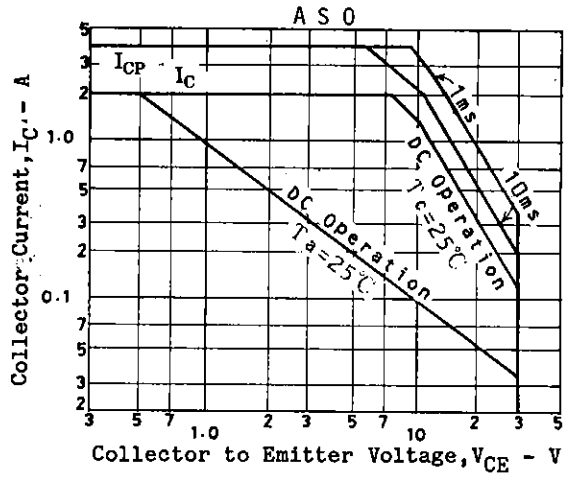
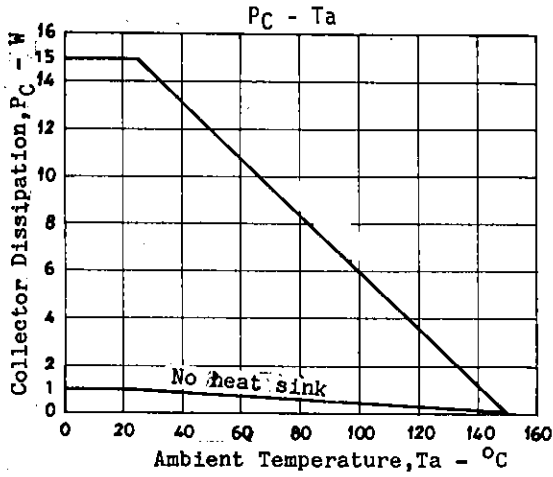
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SANYO: TP-FA

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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