

<b>SANYO</b>	No.2116B	<b>2SD1806</b>
	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

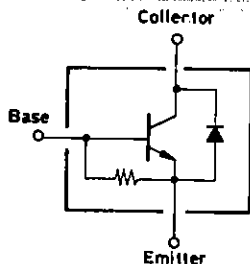
**Absolute Maximum Ratings at Ta=25°C**

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

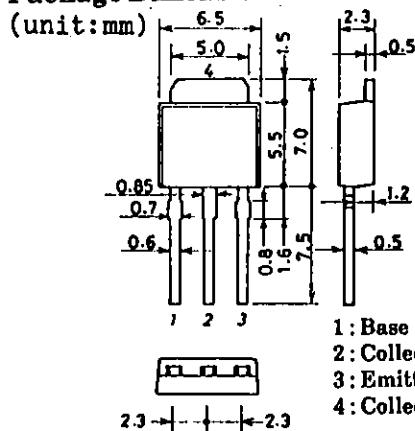
**Electrical Characteristics at Ta=25°C**

		min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$ $V_{CB}=20V, I_E=0$			1.0	$\mu A$
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 $\Omega$

**Electrical Connection**



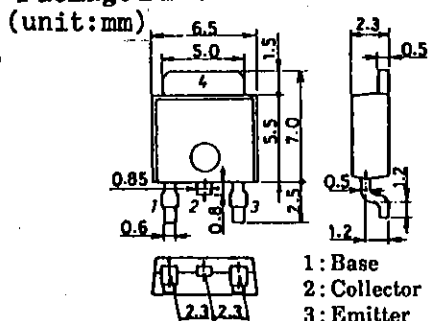
**Package Dimensions 2045B**



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

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**Package Dimensions 2044B**

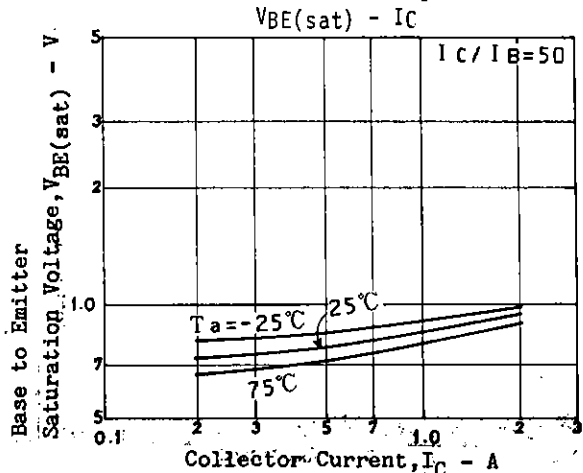
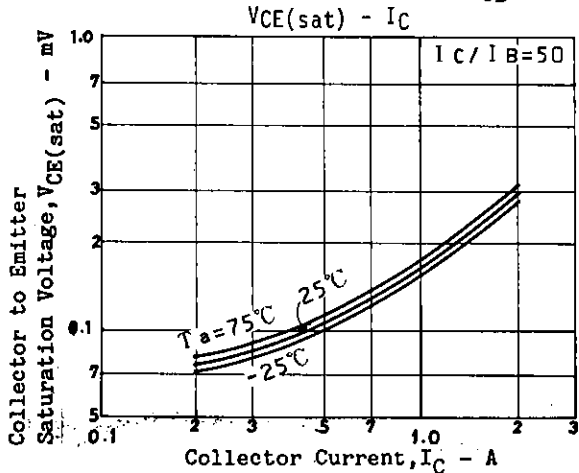
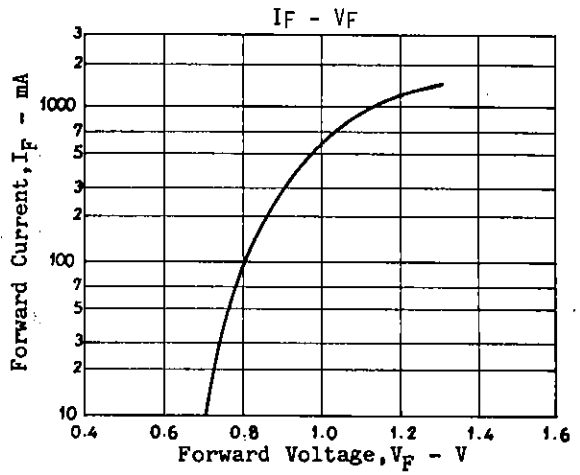
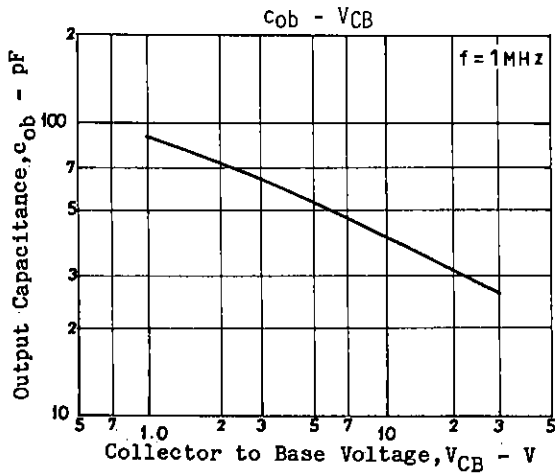
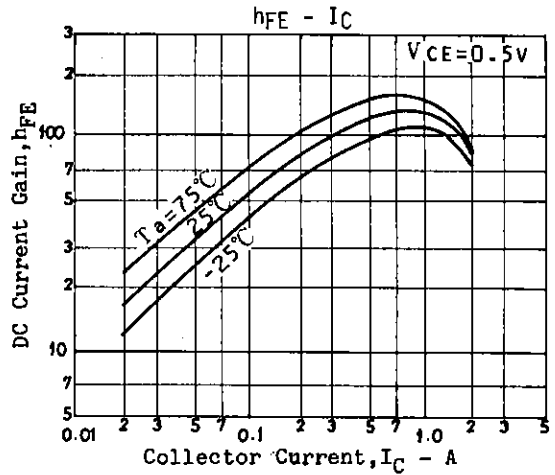
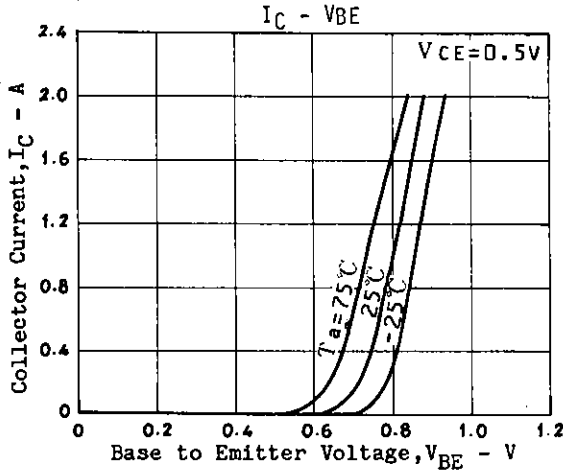
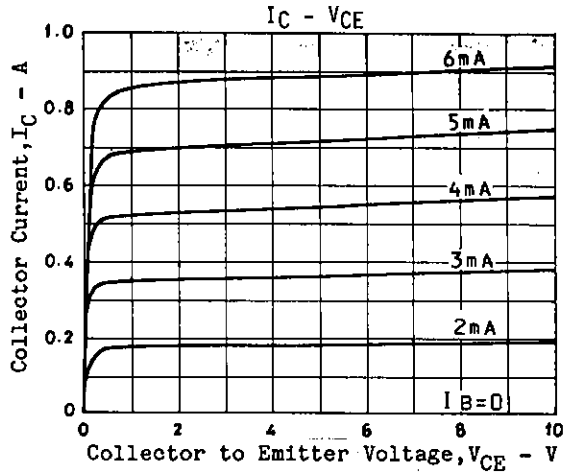
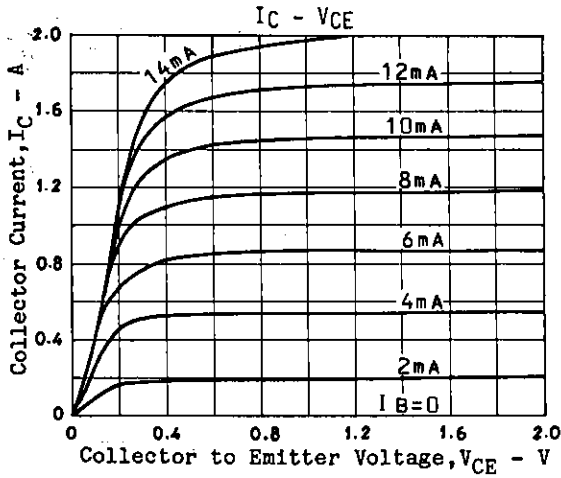


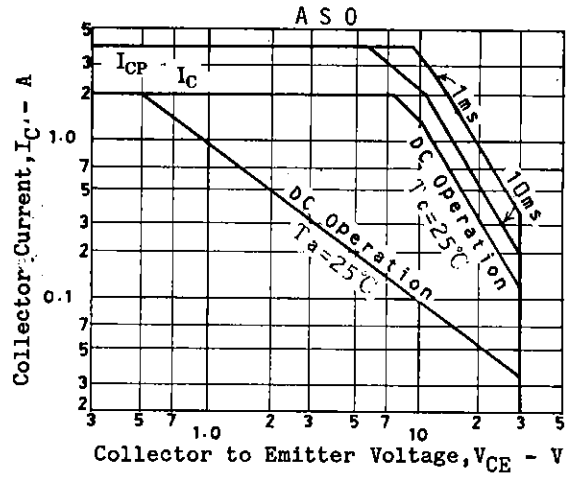
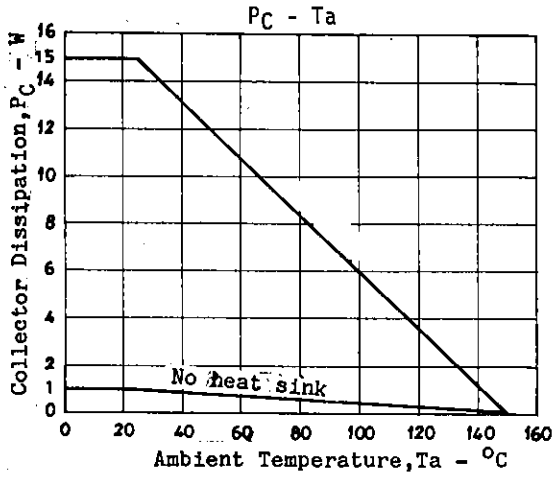
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