

**2SD1145****High-Current Driver Applications****Applications**

- Relay drivers, hammer drivers, lamp drivers, strobe
- DC-DC converters, motor drivers.

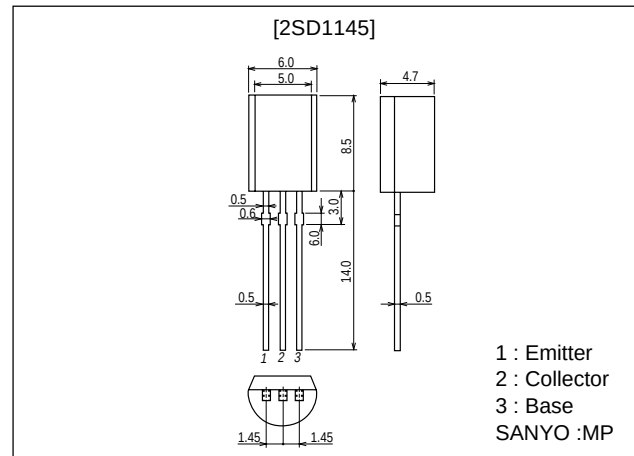
Features

- Low saturation voltage.
- Large current capacity and wide ASO.

Package Dimensions

unit:mm

2006B

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		60	V
Collector-to-Emitter Voltage	V_{CEO}		20	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		5	A
Collector Current (Pulse)	I_{CP}	100ms, single pulse	8	A
Collector Dissipation	P_C		0.9	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}	$V_{CB}=50\text{V}, I_E=0$			1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			1.0	μA
DC Current Gain	h_{FE1}	$V_{CE}=2\text{V}, I_C=0.5\text{A}$	100*		560*	
	h_{FE2}	$V_{CE}=2\text{V}, I_C=3\text{A (Pulse)}$	75			
Gain-Bandwidth Product	f_T	$V_{CE}=10\text{V}, I_C=50\text{mA}$		120		MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		45		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3\text{A}, I_B=60\text{mA (Pulse)}$			0.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=3\text{A}, I_B=60\text{mA (Pulse)}$			1.5	V

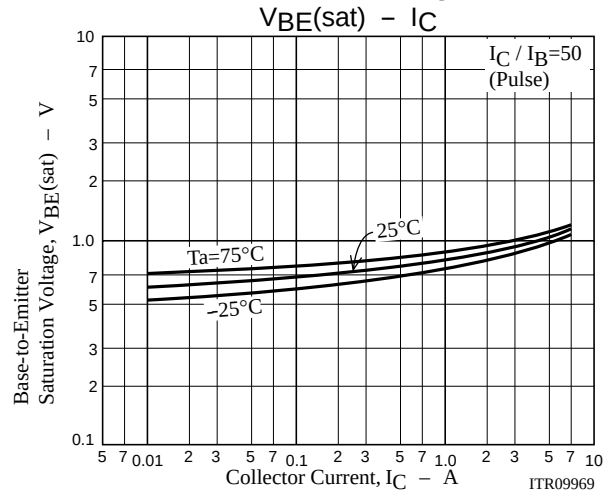
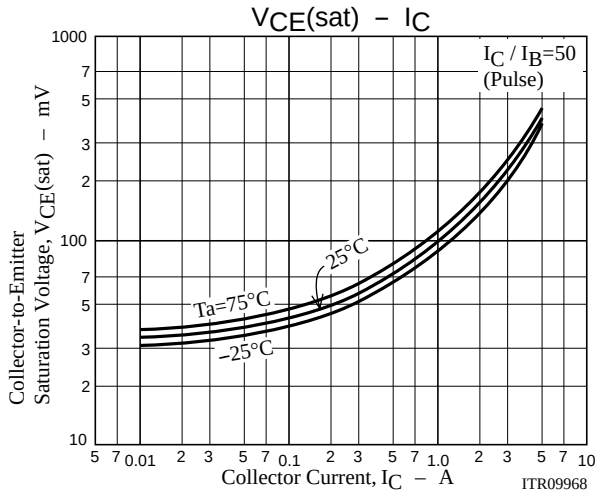
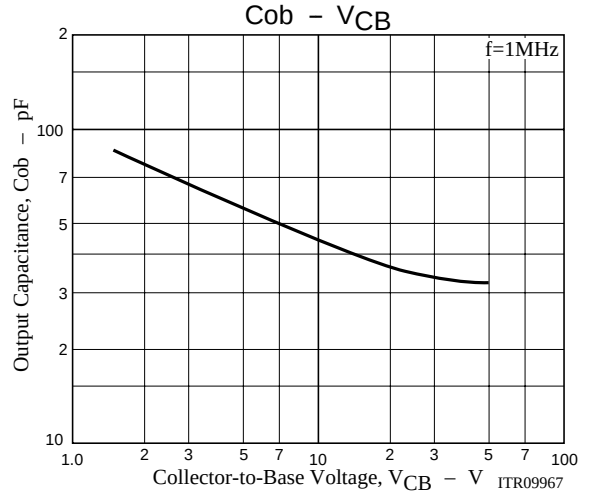
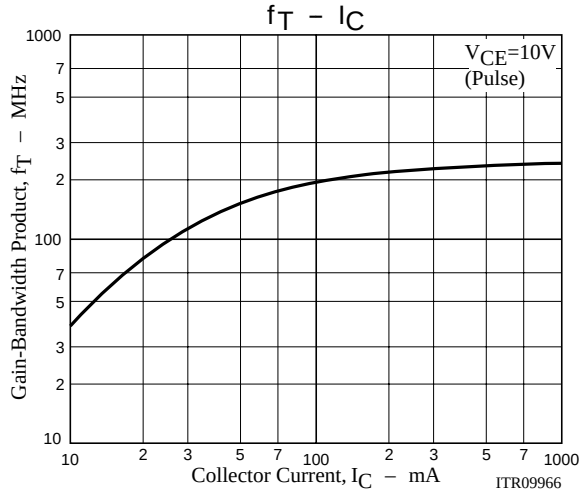
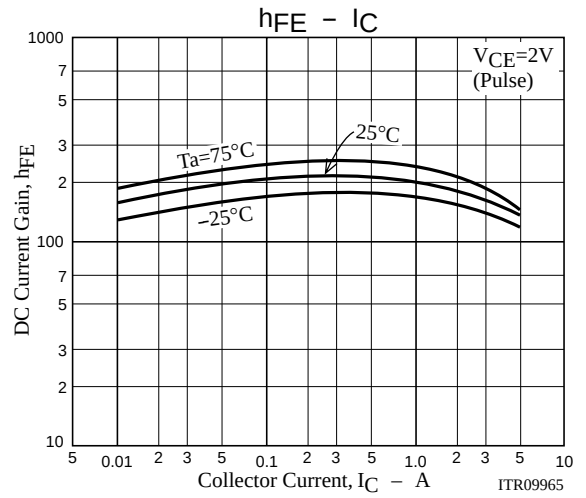
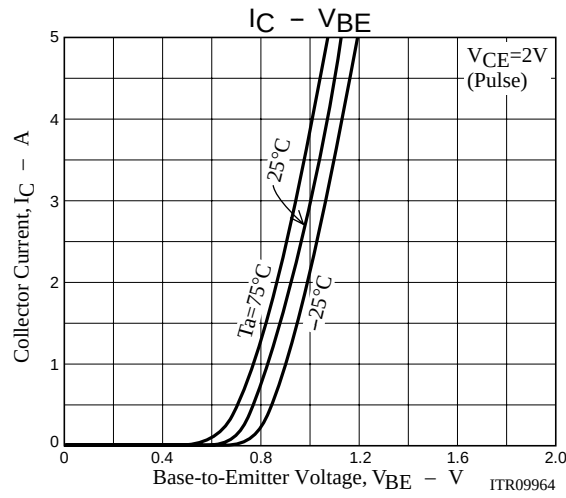
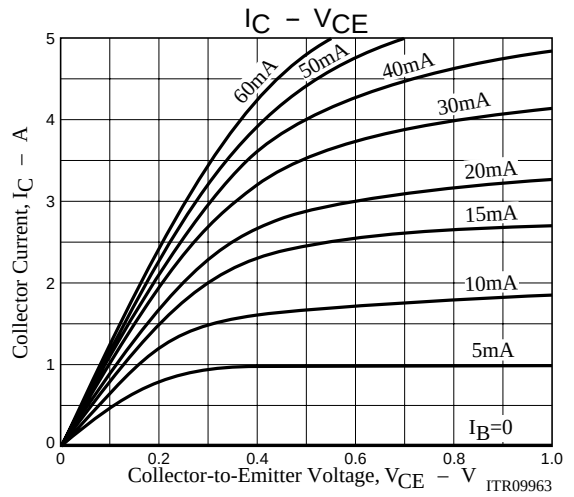
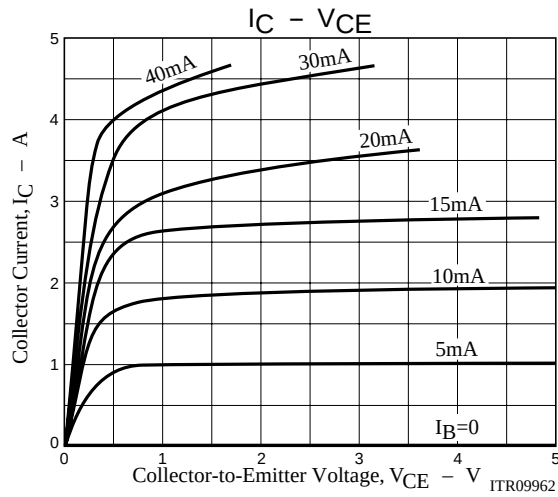
* : The 2SD1145 is classified by 0.5A h_{FE} as follows :

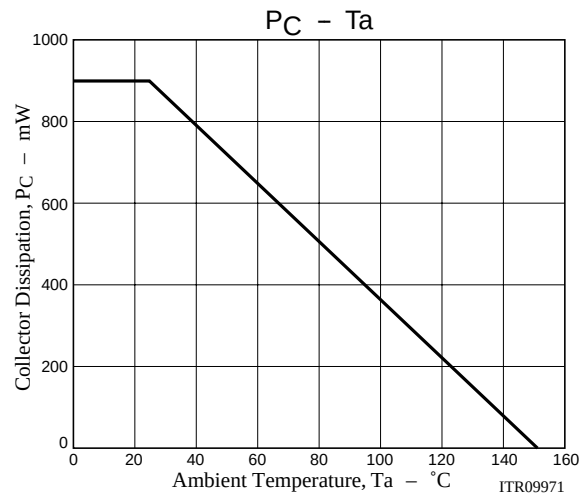
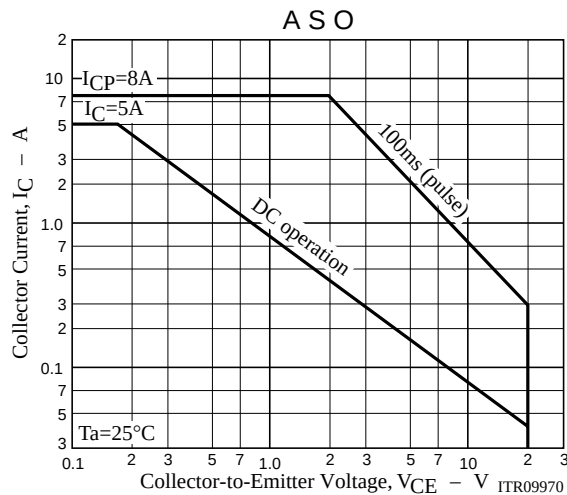
Rank	E	F	G
h_{FE}	100 to 200	160 to 320	280 to 560

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