

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

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

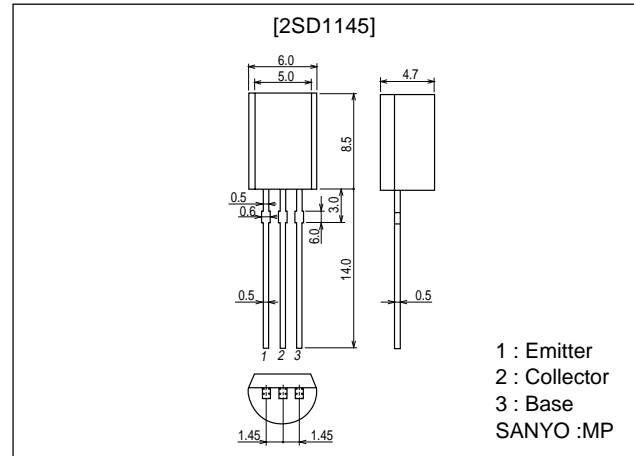
**Features**

- 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	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			1.0	$\mu\text{A}$
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

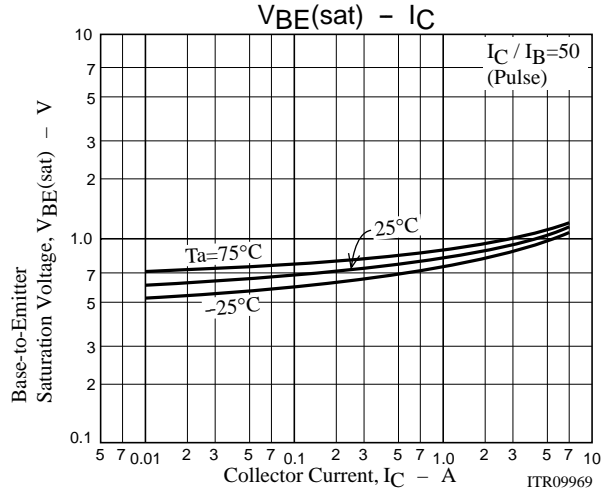
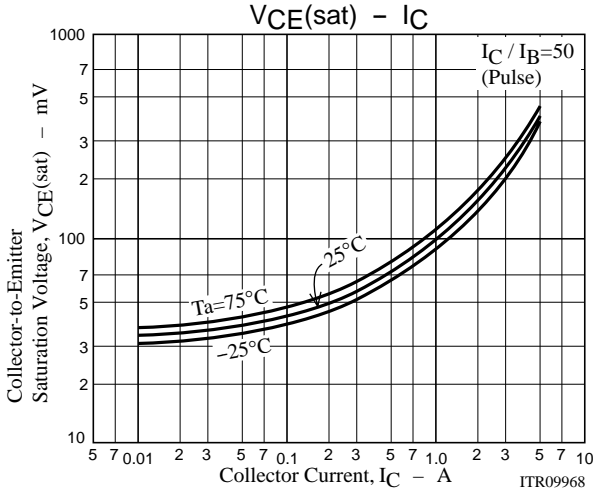
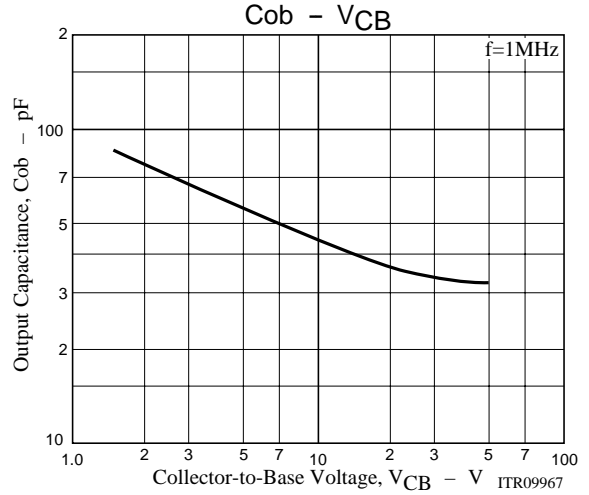
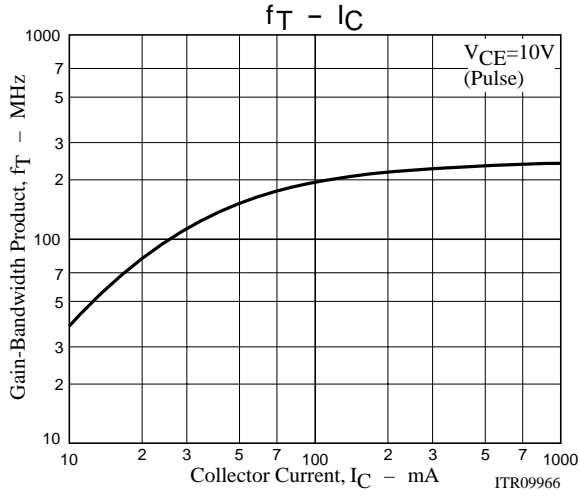
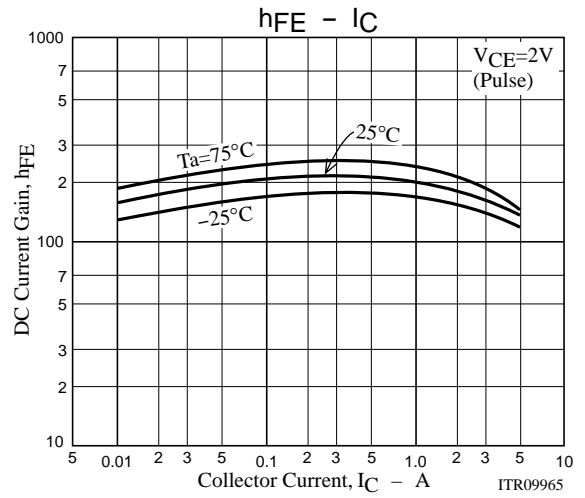
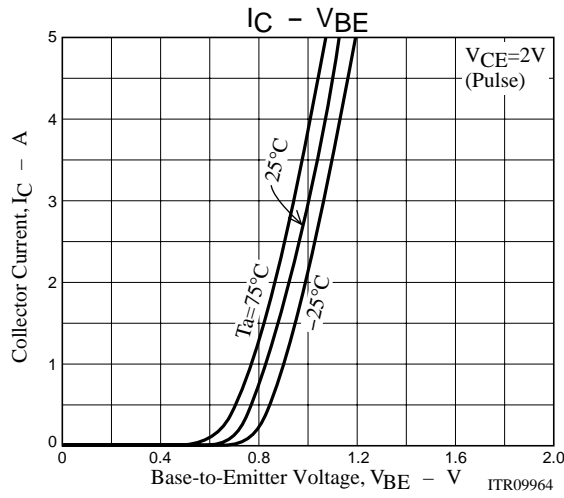
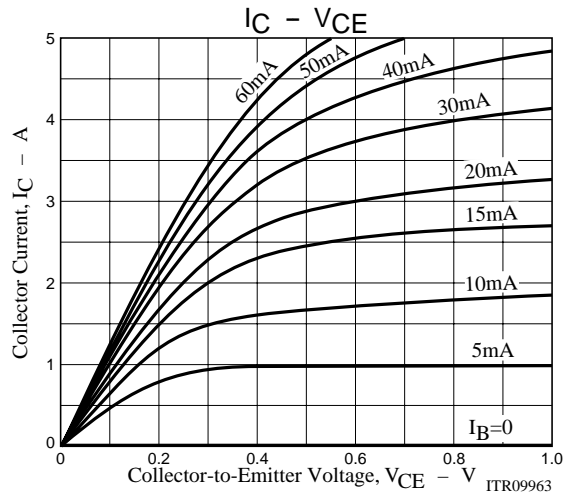
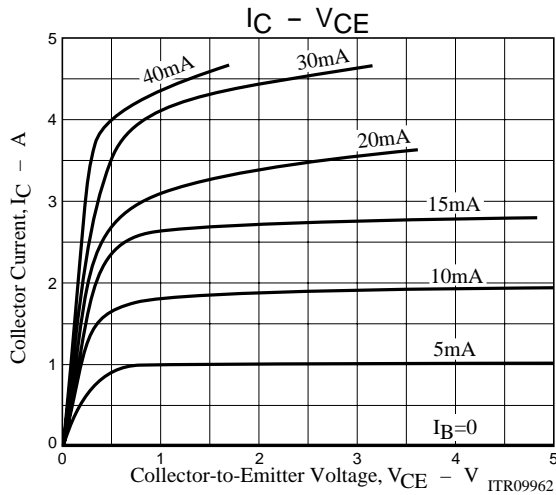
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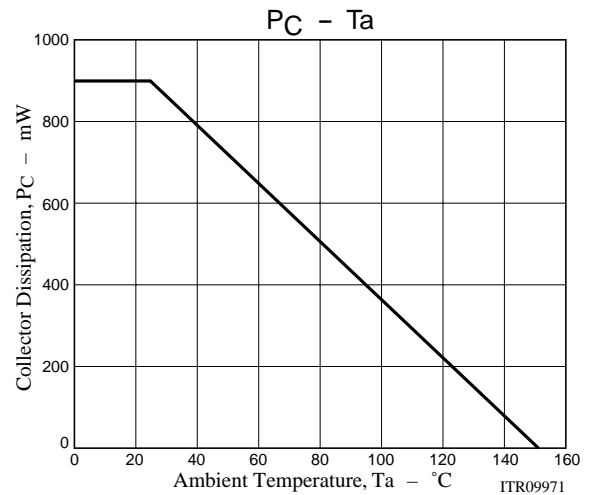
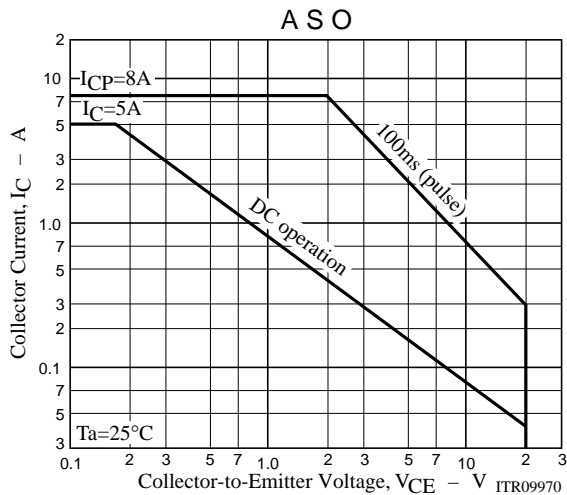
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# 2SD1145



## 2SD1145



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