



# 2SB927/2SD1247

## Large-Current Driving Applications

### Applications

- Power supplies, relay drivers, lamp drivers, electrical equipment.

### Features

- Adoption of FBET, MBIT processes.
- Low saturation voltage.
- Large current capacity and wide ASO.

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( ) : 2SB927

### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		(-30)	V
Collector-to-Emitter Voltage	$V_{CEO}$		(-25)	V
Emitter-to-Base Voltage	$V_{EBO}$		(-6)	V
Collector Current	$I_C$		(-2.5)	A
Collector Current (Pulse)	$I_{CP}$		(-5)	A
Collector Dissipation	$P_C$		1.0	W
Junction Temperature	$T_J$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = (-)20V, I_E = 0$			(-)0.1	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = (-)4V, I_C = 0$			(-)0.1	$\mu A$
DC Current Gain	$h_{FE1}$	$V_{CE} = (-)2V, I_C = (-)0.1A$	100*		560*	
	$h_{FE2}$	$V_{CE} = (-)2V, I_C = (-)1.5A$	65	130		
Gain-Bandwidth Product	$f_T$	$V_{CE} = (-)10V, I_C = (-)50mA$		150		MHz
Common Base Output Capacitance	$C_{ob}$	$V_{CB} = (-)10V, f = 1MHz$		19(32)		pF

\* : The 2SB927/2SD1247 are classified by 0.1A  $h_{FE}$  as follows :

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Rank	R	S	T	U
$h_{FE}$	100 to 200	140 to 280	200 to 400	280 to 560

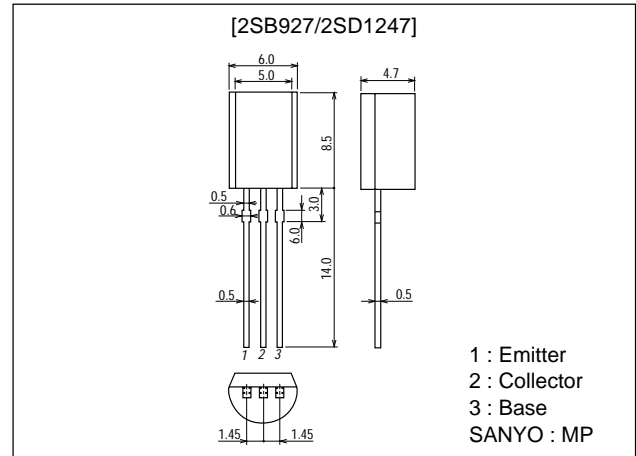
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### Package Dimensions

unit:mm

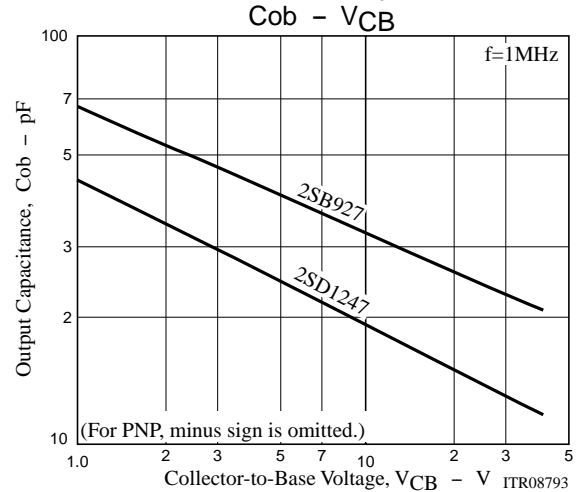
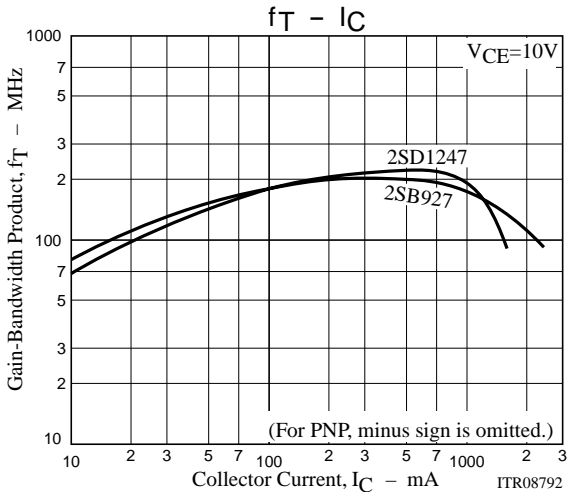
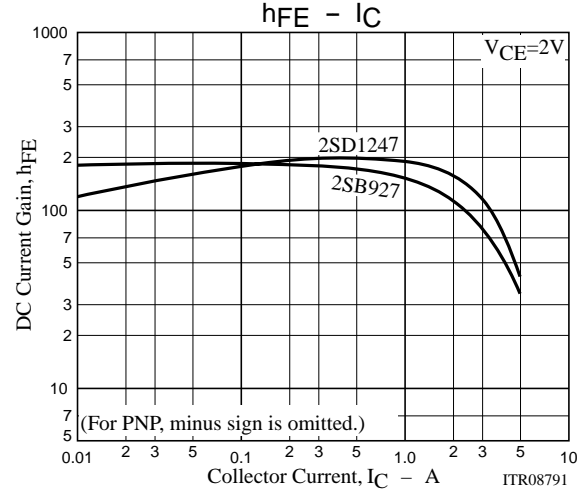
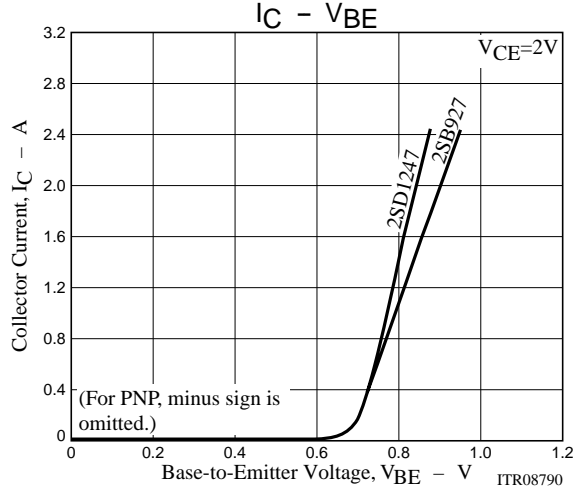
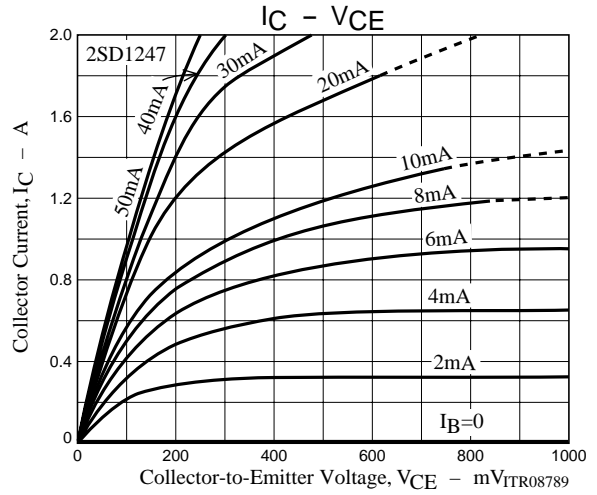
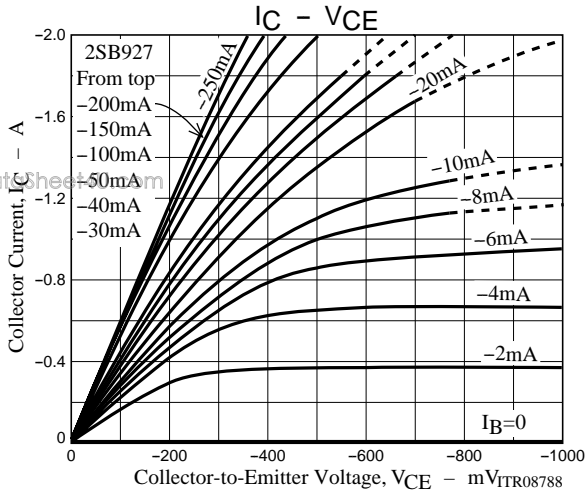
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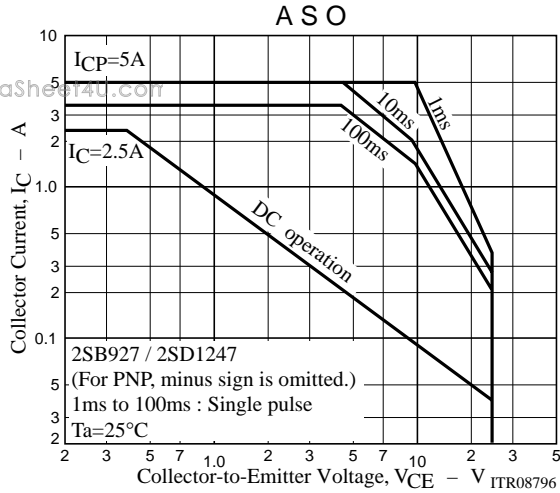
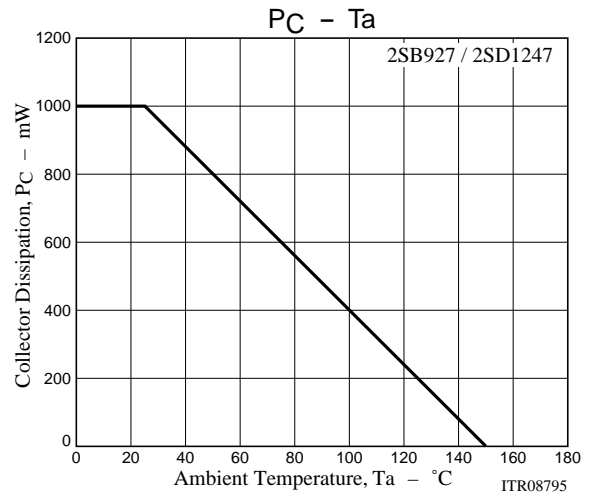
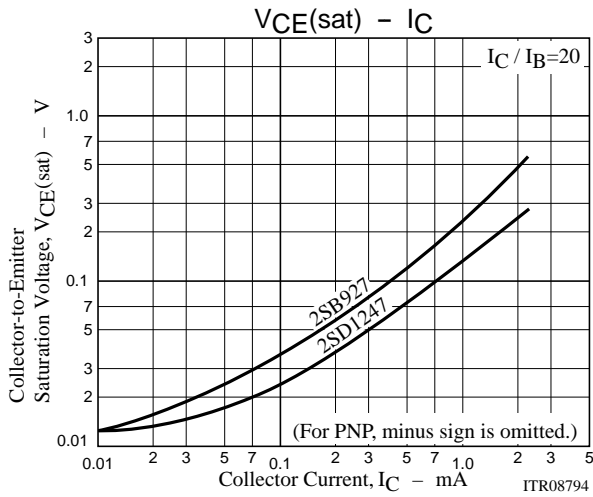
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)1.5A, I_B=(-)75mA$		0.18	0.4	V
				(-0.35)	(-0.6)	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)1.5A, I_B=(-)75mA$		0.85	1.2	V



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