



# 2SD2600

 — NPN Triple Diffused Planar Silicon Darlington Transistor  
**Driver Applications**

## Applications

- Motor drivers, printer hammer drivers, relay drivers, voltage regulator control.

## Features

- High DC current gain.
- Large current capacity and wide ASO.

## Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		110	V
Collector-to-Emitter Voltage	$V_{CE0}$		100	V
Emitter-to-Base Voltage	$V_{EB0}$		6	V
Collector Current	$I_C$		8	A
Collector Current (Pulse)	$I_{CP}$		12	A
Collector Dissipation	$P_C$	$T_c=25^\circ\text{C}$	35	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	$I_{CB0}$	$V_{CB}=80\text{V}, I_E=0\text{A}$			0.1	mA
Emitter Cutoff Current	$I_{EB0}$	$V_{EB}=5\text{V}, I_C=0\text{A}$			3.0	mA
DC Current Gain	$h_{FE}$	$V_{CE}=3\text{V}, I_C=4\text{A}$	1500	4000		
Gain-Bandwidth Product	$f_T$	$V_{CE}=5\text{V}, I_C=4\text{A}$		20		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE}(\text{sat})$	$I_C=4\text{A}, I_B=8\text{mA}$		0.9	1.5	V
Base-to-Emitter Saturation Voltage	$V_{BE}(\text{sat})$	$I_C=4\text{A}, I_B=8\text{mA}$			2.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=5\text{mA}, I_E=0\text{A}$	110			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=50\text{mA}, R_{BE}=\infty$	100			V
Turn-ON Time	$t_{on}$	See specified test circuit.		0.6		$\mu\text{s}$
Storage Time	$t_{stg}$	See specified test circuit.		4.8		$\mu\text{s}$
Fall Time	$t_f$	See specified test circuit.		1.6		$\mu\text{s}$

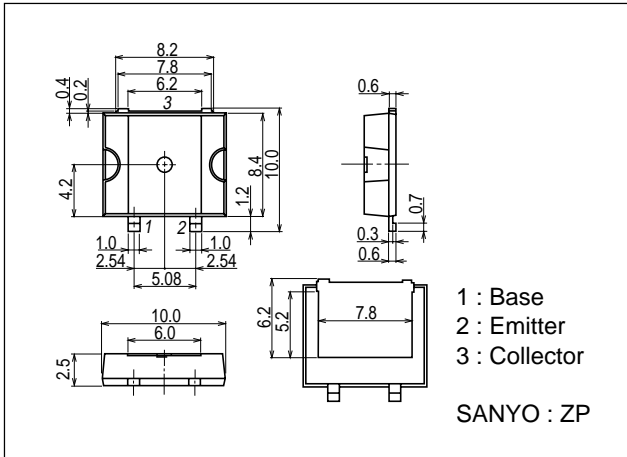
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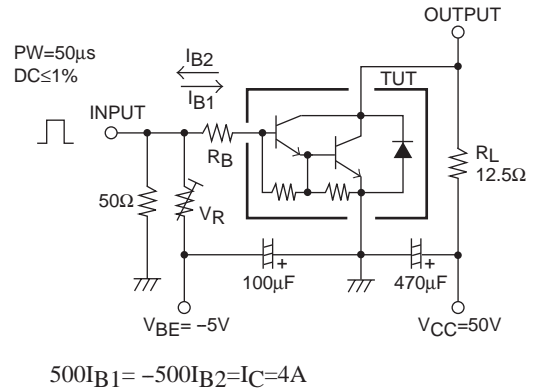
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## Package Dimensions

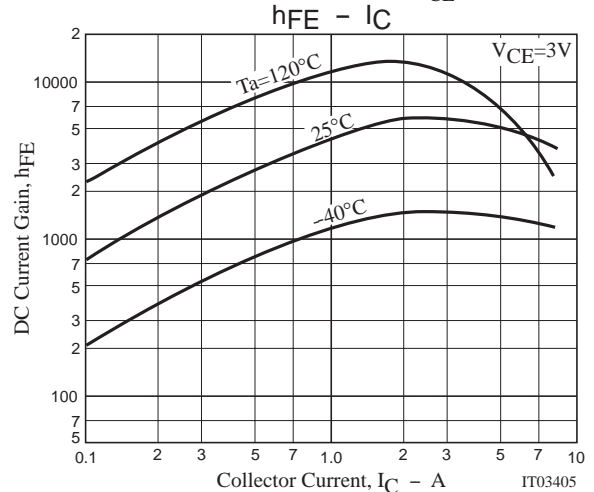
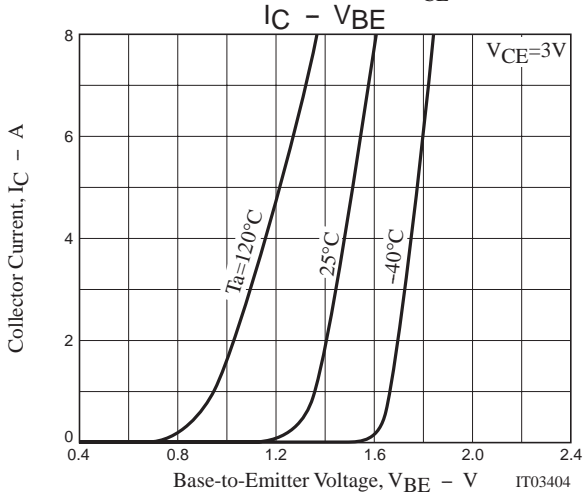
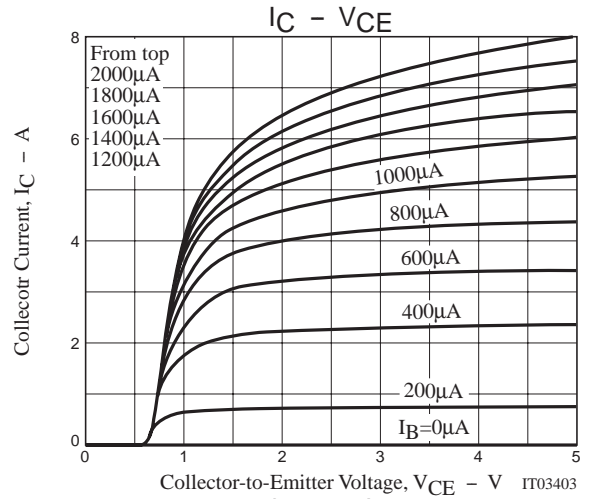
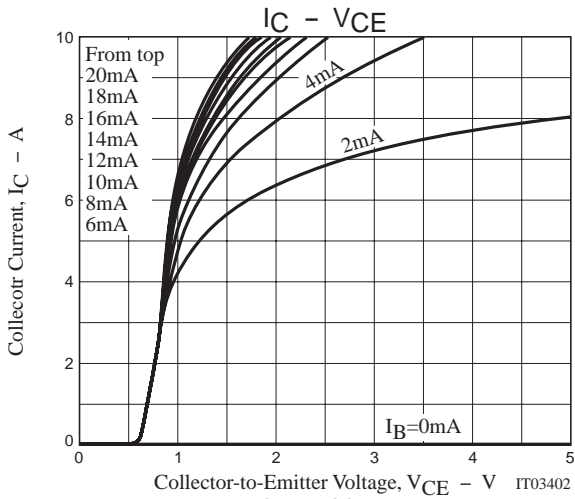
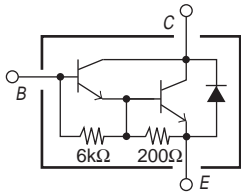
unit : mm (typ)  
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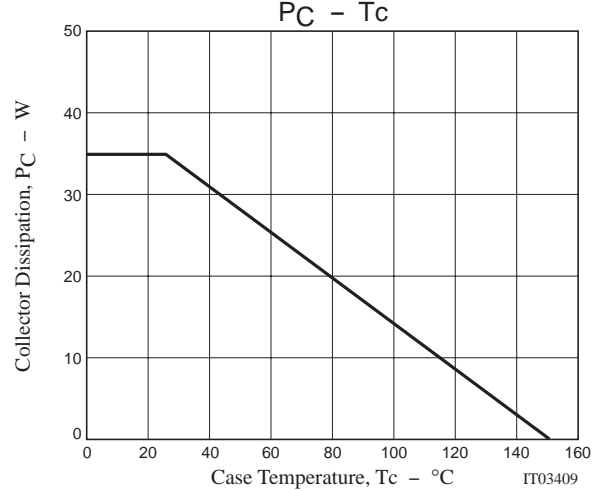
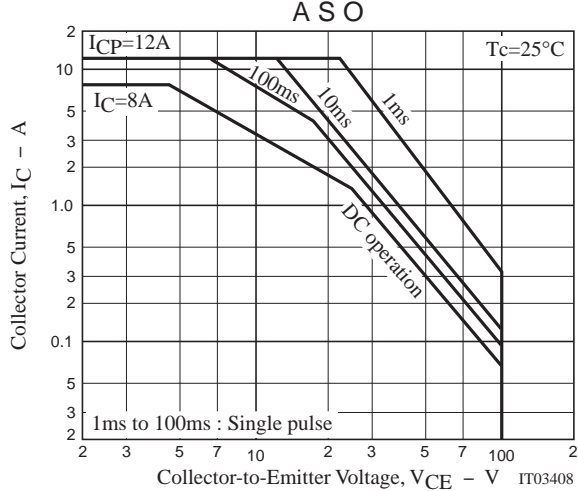
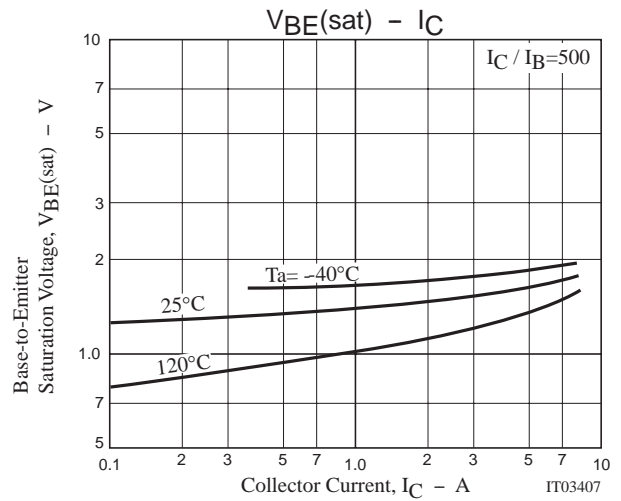
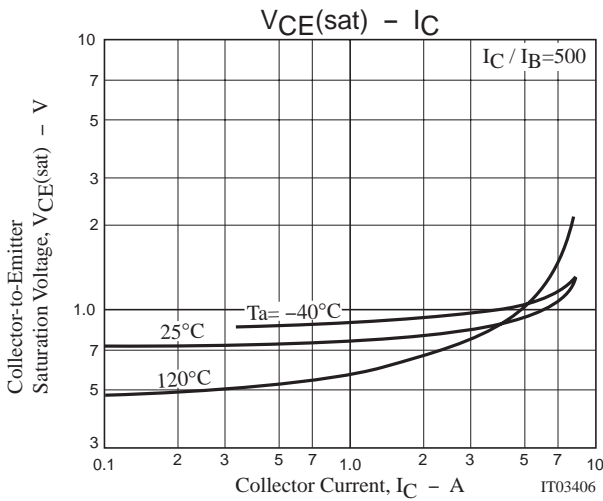
## Switching Time Test Circuit



## Electrical Connection



## 2SD2600



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