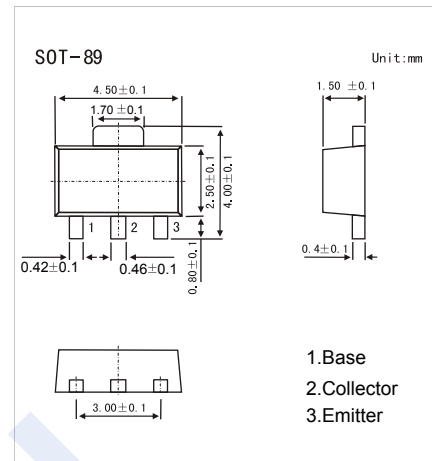


## NPN Transistors

### 2SD2537

#### ■ Features

- High DC current gain.
- High emitter-base voltage.
- Low saturation voltage.



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V <sub>CB0</sub>	30	V
Collector - Emitter Voltage	V <sub>CEO</sub>	25	
Emitter - Base Voltage	V <sub>EBO</sub>	9	
Collector Current - Continuous	I <sub>C</sub>	1.2	A
Collector Current - Pulse (Note.1)	I <sub>CP</sub>	2	
Collector Power Dissipation	P <sub>C</sub>	0.5	W
		2	
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to 150	

Note.1: Single pulse Pw=10ms

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V <sub>CB0</sub>	I <sub>C</sub> = 100 μA, I <sub>E</sub> = 0	30			V
Collector- emitter breakdown voltage	V <sub>CEO</sub>	I <sub>C</sub> = 1 mA, I <sub>B</sub> = 0	25			
Emitter - base breakdown voltage	V <sub>EBO</sub>	I <sub>E</sub> = 100 μA, I <sub>C</sub> = 0	9			
Collector-base cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 30 V, I <sub>E</sub> = 0			0.3	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 9 V, I <sub>C</sub> = 0			0.3	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =500 mA, I <sub>B</sub> =10mA			0.3	V
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =500 mA, I <sub>B</sub> =10mA			1.2	
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 500 mA	820		2700	
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10V, I <sub>E</sub> = 0, f=1MHz		20		pF
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 10V, I <sub>E</sub> = -50mA, f=100MHz		200		MHz

#### ■ Classification of h<sub>FE</sub>

Type	2SD2537-V	2SD2537-W
Range	820-1800	1200-2700
Marking	DV	DW

# NPN Transistors

## 2SD2537

### Typical Characteristics

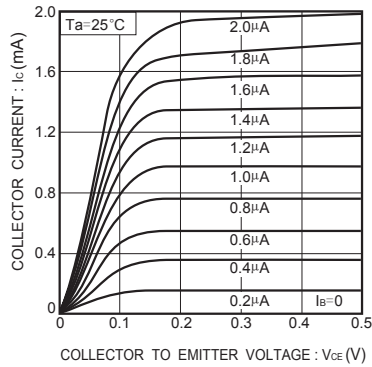


Fig. 1 Ground emitter output characteristics (I)

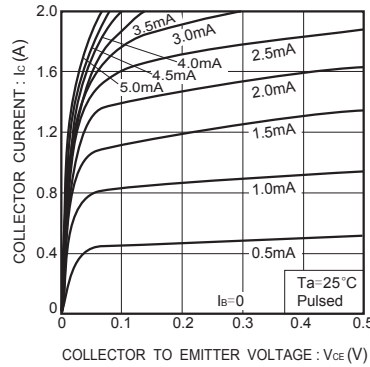


Fig. 2 Ground emitter output characteristics (II)

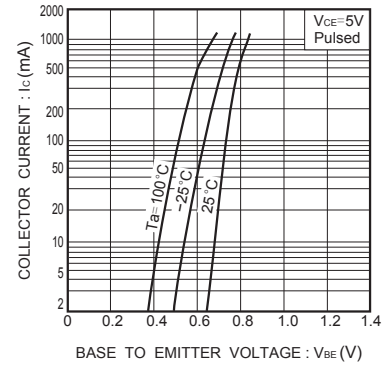


Fig. 3 Ground emitter propagation characteristics

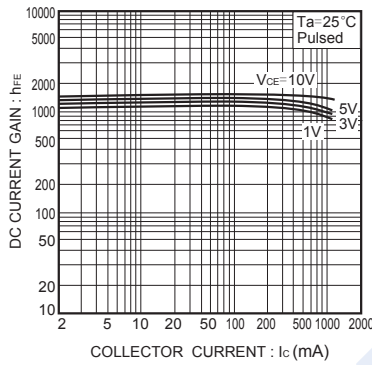


Fig. 4 DC current gain vs. collector current (I)

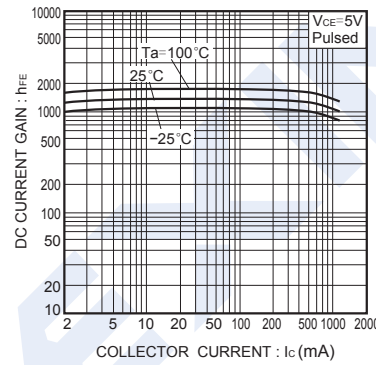


Fig. 5 DC current gain vs. collector current (II)

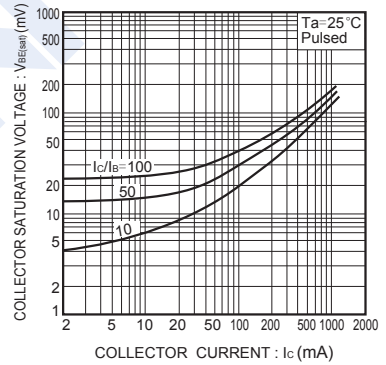


Fig. 6 Collector-emitter saturation voltage vs. collector current (I)

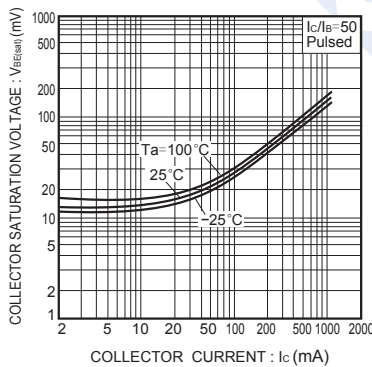


Fig. 7 Collector-emitter saturation voltage vs. collector current (II)

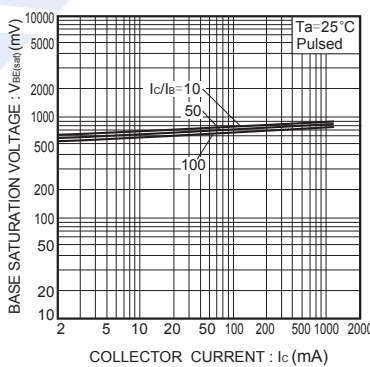


Fig. 8 Base-emitter saturation voltage vs. collector current (I)

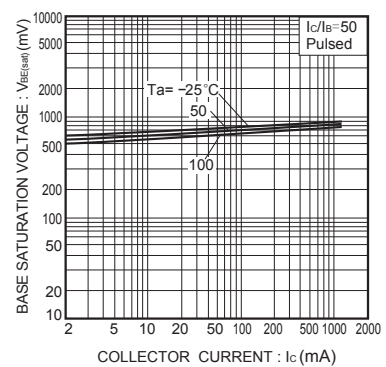


Fig. 9 Base-emitter saturation voltage vs. collector current (II)

## NPN Transistors

## 2SD2537

## ■ Typical Characteristics

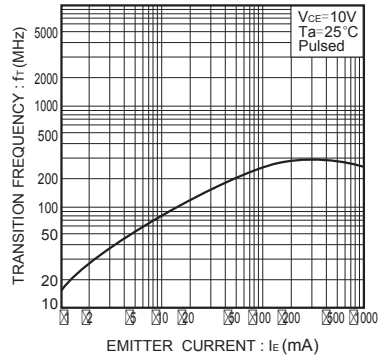


Fig.10 Gain bandwidth product vs. emitter current

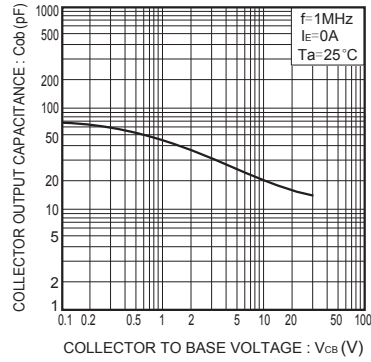


Fig.11 Collector output capacitance vs. collector-base voltage