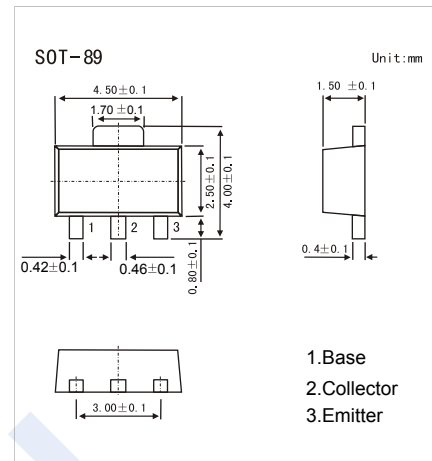


NPN Transistors

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 _{CB0}	30	V
Collector - Emitter Voltage	V _{CEO}	25	
Emitter - Base Voltage	V _{EB0}	9	
Collector Current - Continuous	I _C	1.2	A
Collector Current - Pulse (Note.1)	I _{CP}	2	
Collector Power Dissipation	P _C	0.5	W
		2	
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	-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 _{CB0}	I _C = 100 μA, I _E = 0	30			V
Collector- emitter breakdown voltage	V _{CEO}	I _C = 1 mA, I _B = 0	25			
Emitter - base breakdown voltage	V _{EB0}	I _E = 100 μA, I _C = 0	9			
Collector-base cut-off current	I _{CB0}	V _{CB} = 30 V, I _E = 0			0.3	μA
Emitter cut-off current	I _{EB0}	V _{EB} = 9 V, I _C =0			0.3	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =500 mA, I _B =10mA			0.3	V
Base - emitter saturation voltage	V _{BE(sat)}	I _C =500 mA, I _B =10mA			1.2	
DC current gain	h _{FE}	V _{CE} = 5V, I _C = 500 mA	820		2700	
Collector output capacitance	C _{ob}	V _{CB} = 10V, I _E = 0, f=1MHz		20		pF
Transition frequency	f _T	V _{CE} = 10V, I _E = -50mA, f=100MHz		200		MHz

■ Classification of h_{FE}

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

NPN Transistors

2SD2537

Typical Characteristics

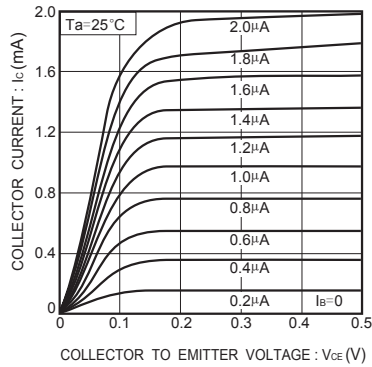


Fig. 1 Ground emitter output characteristics (I)

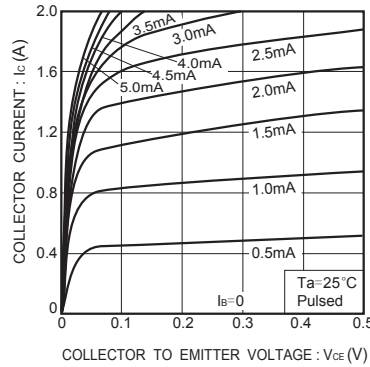


Fig. 2 Ground emitter output characteristics (II)

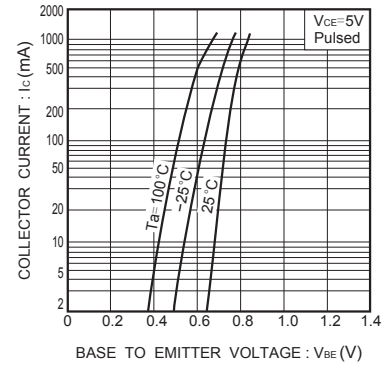


Fig. 3 Ground emitter propagation characteristics

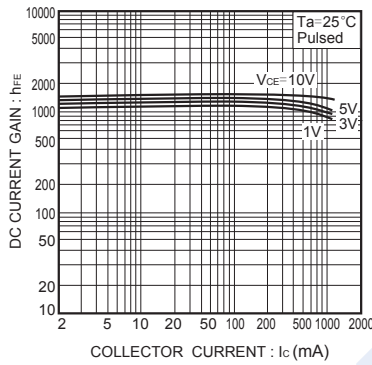


Fig. 4 DC current gain vs. collector current (I)

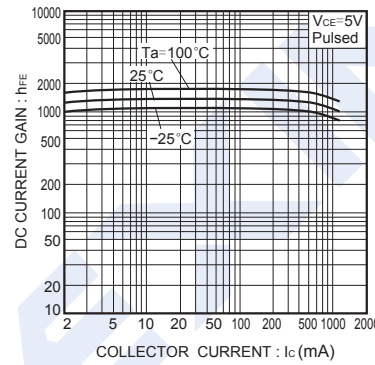


Fig. 5 DC current gain vs. collector current (II)

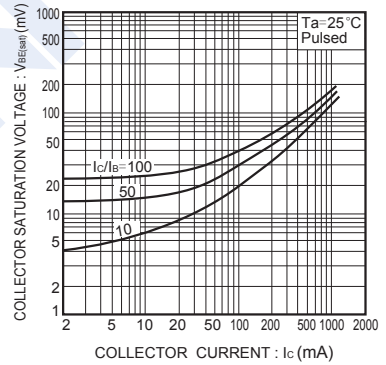


Fig. 6 Collector-emitter saturation voltage vs. collector current (I)

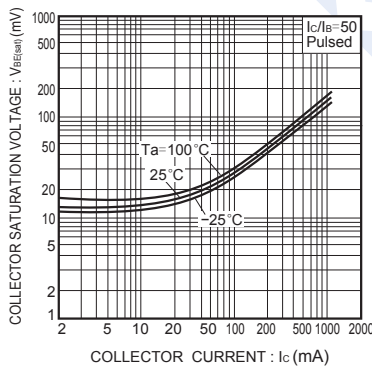


Fig. 7 Collector-emitter saturation voltage vs. collector current (II)

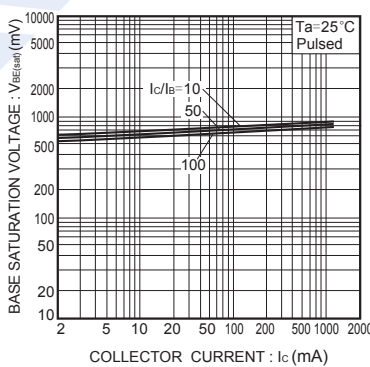


Fig. 8 Base-emitter saturation voltage vs. collector current (I)

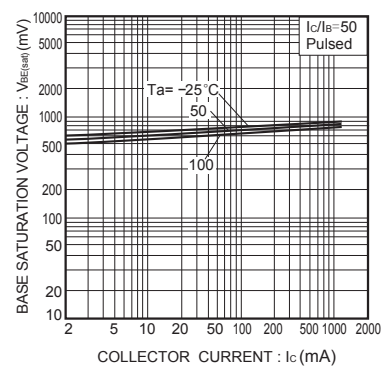


Fig. 9 Base-emitter saturation voltage vs. collector current (II)

NPN Transistors

2SD2537

■ Typical Characteristics

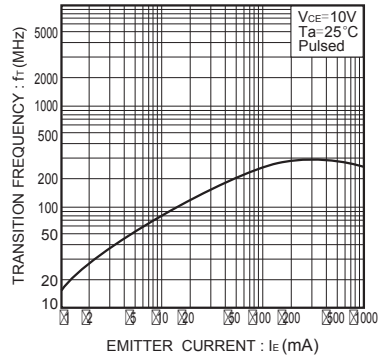


Fig.10 Gain bandwidth product vs. emitter current

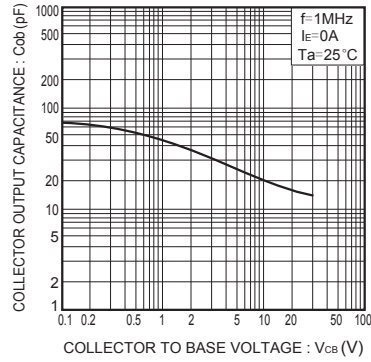


Fig.11 Collector output capacitance vs. collector-base voltage