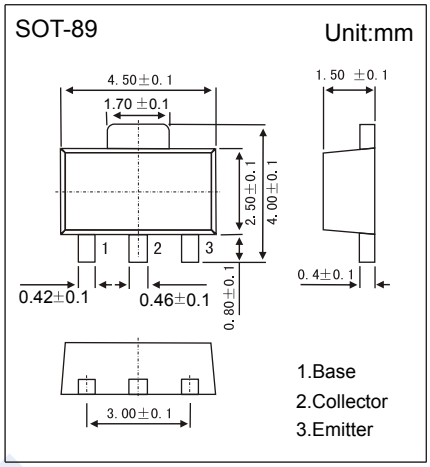
NPN Transistors

2SD2459



■ Features

- Collector Current Capability I_C=1A
- Collector Emitter Voltage V_{CEO}=150V

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	150	V
Collector - Emitter Voltage	V_{CEO}	150	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	1	A
Collector Current - Pulse	I_{CP}	1.5	
Collector Power Dissipation	P_C	1	W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 μA, I_E= 0	150			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA, I_B= 0	150			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A, I_C= 0	5			
Collector-base cut-off current	I_{CBO}	V_{CB}= 150 V , I_E= 0			0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 5V , I_C=0			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500mA, I_B=25mA			0.3	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=500mA, I_B=25mA			1.2	
DC current gain	h_{FE}	V_{CE}= 2V, I_C=100mA	120		340	
		V_{CE}= 2V, I_C=500mA	40			
Collector output capacitance	C_{ob}	V_{CB}= 10V,I_E=0, f=1MHz			20	pF
Transition frequency	f_T	V_{CB}= 10V, I_E=-50mA ,f=200MHz		90		MHz

■ Classification of hfe(1)

Type	2SD2459-R	2SD2459-S
Range	120-240	170-340
Marking	2ER	2ES

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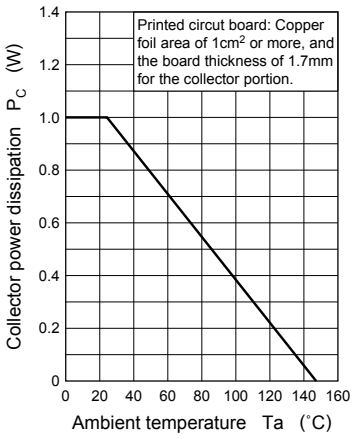
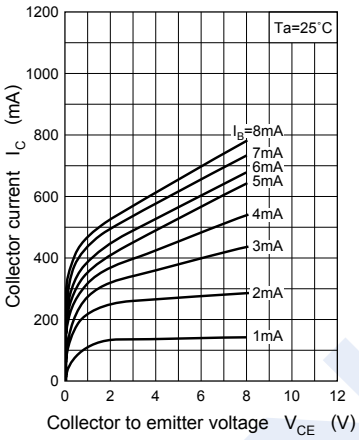
■ Typical Characterisitics

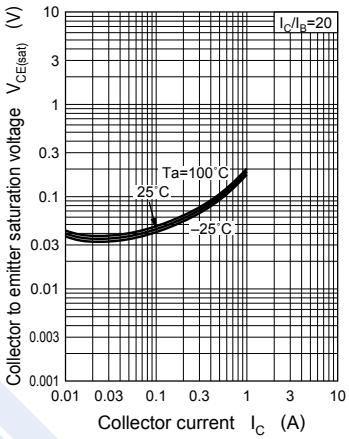
P_C — Ta



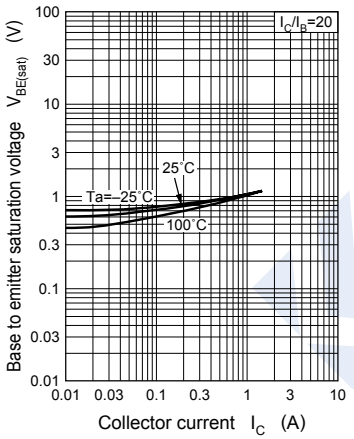
I_C — V_{CE}



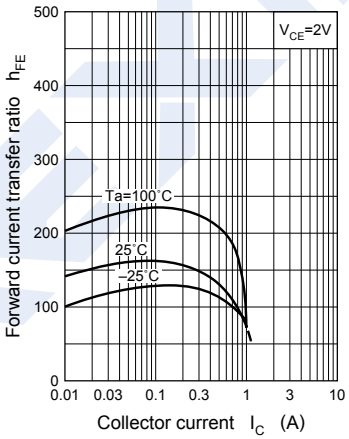
$V_{CE(sat)}$ — I_C



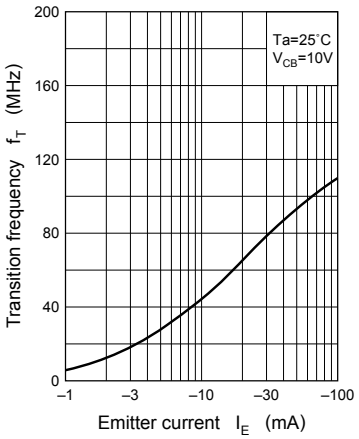
$V_{BE(sat)}$ — I_C



h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}