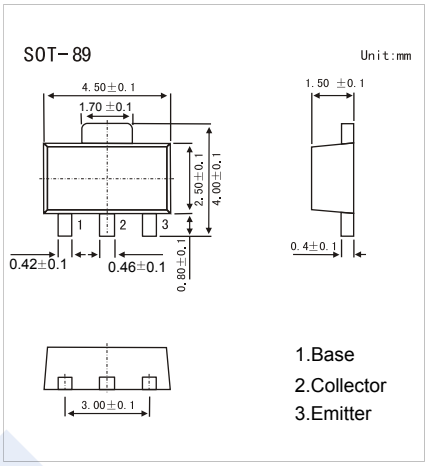
NPN Transistors

2SD1119



■ Features

- Collector Current Capability I_C=3 A
- Collector Emitter Voltage V_{CEO}=25 V

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	40	V
Collector - Emitter Voltage	V_{CEO}	25	
Emitter - Base Voltage	V_{EBO}	7	
Collector Current - Continuous	I_C	3	A
Collector Power Dissipation	P_C	500	mW
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 uA, I_E= 0	40			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA, I_B= 0	25			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 uA, I_C= 0	7			
Collector-base cut-off current	I_{CBO}	V_{CB}= 40 V , I_E= 0			0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 7V , I_C=0			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=3 A, I_B=100 mA			1	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=3 A, I_B=100 mA			1.2	
DC current gain	h_{FE}	V_{CE}= 2V, I_C= 500mA	230		600	
		V_{CE}= 2V, I_C= 2 A	150			
Collector output capacitance	C_{ob}	V_{CB}= 20V, I_E= 0,f=1MHz			50	pF
Transition frequency	f_T	V_{CE}= 6V, I_C= 50 mA,f=200MHz		150		MHz

■ Classification of $h_{fe(1)}$

Type	2SD1119-Q	2SD1119-R
Range	230-380	340-600
Marking	TQ	TR