

## SOT-89 Plastic-Encapsulate Transistors

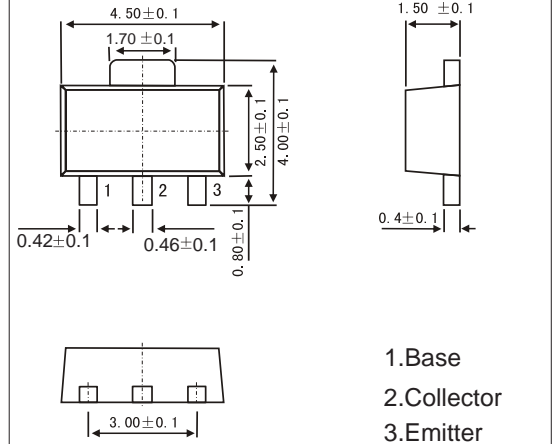
### Features

- Collector Current Capability  $I_C=3\text{ A}$
- Collector Emitter Voltage  $V_{CEO}=25\text{ V}$
- NPN Transistors

### MECHANICAL DATA

- Case style:SOT-89molded plastic
- Mounting position:any

SOT-89



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	40	V
Collector - Emitter Voltage	$V_{CE0}$	25	
Emitter - Base Voltage	$V_{EB0}$	7	
Collector Current - Continuous	$I_C$	3	A
Collector Power Dissipation	$P_C$	500	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{stg}$	-55 to 150	

### PACKAGE INFORMATION

Device	Package	Shipping
2SD1119	SOT-89	1000/Tape&Reel

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_C=100\text{ }\mu\text{A}, I_E=0$	40			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_C=1\text{ mA}, I_B=0$	25			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E=100\text{ }\mu\text{A}, I_C=0$	7			
Collector-base cut-off current	$I_{CB0}$	$V_{CB}=40\text{ V}, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB}=7\text{ V}, I_C=0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=3\text{ A}, I_B=100\text{ mA}$			1	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C=3\text{ A}, I_B=100\text{ mA}$			1.2	
DC current gain	$h_{FE}$	$V_{CE}=2\text{ V}, I_C=500\text{ mA}$	230		600	
		$V_{CE}=2\text{ V}, I_C=2\text{ A}$	150			
Collector output capacitance	$C_{ob}$	$V_{CB}=20\text{ V}, I_E=0, f=1\text{ MHz}$			50	pF
Transition frequency	$f_T$	$V_{CE}=6\text{ V}, I_C=50\text{ mA}, f=200\text{ MHz}$		150		MHz

### Classification of $h_{FE}(1)$

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