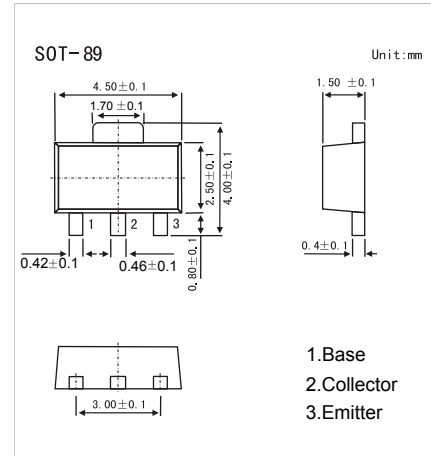


**NPN Transistors**

**2SD965**

■ Features

- Low Collector-Emitter Saturation Voltage
- Large Collector Power Dissipation and Current
- Mini Power Type Package



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V <sub>CB0</sub>	40	V
Collector - Emitter Voltage	V <sub>CE0</sub>	20	
Emitter - Base Voltage	V <sub>EB0</sub>	7	
Collector Current - Continuous	I <sub>C</sub>	5	A
Collector Power Dissipation	P <sub>C</sub>	750	mW
Thermal Resistance From Junction To Ambient	R <sub>θJA</sub>	167	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to 150	

■ 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	40			V
Collector- emitter breakdown voltage	V <sub>CE0</sub>	I <sub>C</sub> = 1 mA, I <sub>B</sub> = 0	20			
Emitter - base breakdown voltage	V <sub>EB0</sub>	I <sub>E</sub> = 100 μA, I <sub>C</sub> = 0	7			
Collector-base cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0			100	nA
Emitter cut-off current	I <sub>EB0</sub>	V <sub>EB</sub> = 7V, I <sub>C</sub> =0			100	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =3 A, I <sub>B</sub> =100mA			1	V
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =3 A, I <sub>B</sub> =100mA			1.2	
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 1mA		200		
	h <sub>FE(2)</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 500mA	230		950	
	h <sub>FE(3)</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 2A	150			
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 20V, I <sub>E</sub> = 0, f=1MHz			50	pF
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 6V, I <sub>C</sub> = 50mA, f=200MHz		150		MHz

■ Classification of h<sub>FE(2)</sub>

Type	2SD965-Q	2SD965-R	2SD965-S	2SD965-T
Range	230-380	340-600	560-800	560-950
Marking	965Q	965R	965S	965T



炬芯微  
XUANXINWEI

SMD Type

Transistors

# NPN Transistors

## 2SD965

### Typical Characteristics

