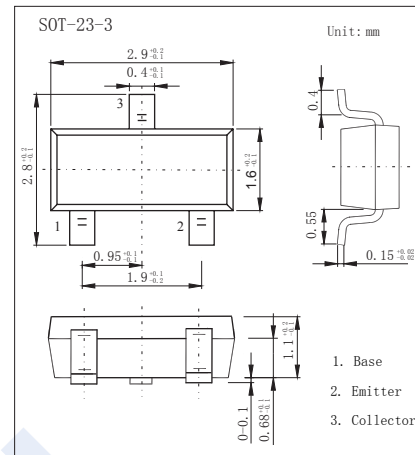


## NPN Transistors

### 2SC4432-HF

#### ■ Features

- High power gain.
- High cutoff frequency.
- Complementary to 2SA1815-HF
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



#### ■ 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>	18	
Emitter - Base Voltage	V <sub>EB0</sub>	3	
Collector Current - Continuous	I <sub>C</sub>	50	mA
Collector Power Dissipation	P <sub>C</sub>	250	mW
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	18			
Emitter - base breakdown voltage	V <sub>EB0</sub>	I <sub>E</sub> = 100 μA, I <sub>C</sub> = 0	3			
Collector-base cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 30V, I <sub>E</sub> = 0			0.1	μA
Emitter cut-off current	I <sub>EB0</sub>	V <sub>EB</sub> = 2V, I <sub>C</sub> = 0			0.1	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA			0.2	V
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA			1.2	
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 5 mA	60		270	
Power Gain	PG	V <sub>CE</sub> = 10V, I <sub>C</sub> = 10mA, f=100MHz		28		dB
Base-to-Collector Time Constant	τ <sub>bb'CC</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 5 mA, f=31.9 MHz			23	ps
Reverse Transfer Capacitance	C <sub>re</sub>	V <sub>CB</sub> = 10V, f=1MHz		0.45		pF
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10V, f=1MHz		0.7	1.2	
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 5mA		750		MHz

#### ■ Classification of h<sub>FE</sub>

Type	2SC4432-RT3-HF	2SC4432-RT4-HF	2SC4432-RT5-HF
Range	40-80	60-120	160-320
Marking	RT3 <sub>F</sub>	RT4 <sub>F</sub>	RT5 <sub>F</sub>

### NPN Transistors

### 2SC4432-HF

■ Typical Characteristics

