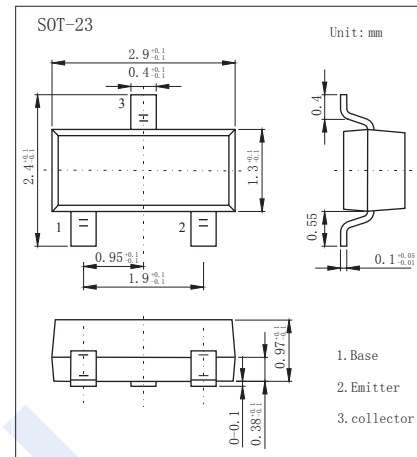


NPN Transistors

2SC4432

■ Features

- High power gain.
- High cutoff frequency.
- Complementary to 2SA1815

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	40	V
Collector - Emitter Voltage	V_{CE0}	18	
Emitter - Base Voltage	V_{EB0}	3	
Collector Current - Continuous	I_c	50	mA
Collector Power Dissipation	P_c	250	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_c = 100 \mu\text{A}, I_E = 0$	40			V
Collector- emitter breakdown voltage	V_{CE0}	$I_c = 1 \text{ mA}, I_B = 0$	18			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu\text{A}, I_c = 0$	3			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 30\text{V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = 2\text{V}, I_c = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 10\text{mA}, I_B = 1\text{mA}$			0.2	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 10\text{mA}, I_B = 1\text{mA}$			1.2	
DC current gain	h_{FE}	$V_{CE} = 10\text{V}, I_c = 5 \text{ mA}$	60		270	
Power Gain	PG	$V_{CE} = 10\text{V}, I_c = 10\text{mA}, f = 100\text{MHz}$		28		dB
Base-to-Collector Time Constant	$\tau_{bb'CC}$	$V_{CE} = 10\text{V}, I_c = 5 \text{ mA}, f = 31.9 \text{ MHz}$			23	ps
Reverse Transfer Capacitance	C_{re}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		0.45		pF
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		0.7	1.2	
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_c = 5\text{mA}$		750		MHz

■ Classification of h_{fe}

Type	2SC4432-RT3	2SC4432-RT4	2SC4432-RT5
Range	60-120	90-180	135-270
Marking	RT3	RT4	RT5

NPN Transistors

2SC4432

■ Typical Characteristics

