

2SC4432

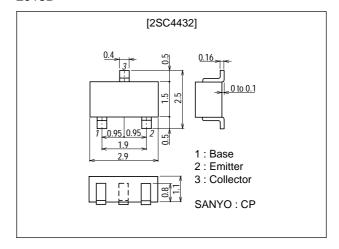
# High-Frequency General-Purpose Amplifier Applications

### **Features**

- · High power gain.
- · High cutoff frequency.
- · Small Cob, Cre.
- Ultrasmall-sized package permitting the 2SC4432applied sets to be made small and slim.

## **Package Dimensions**

unit : mm 2018B



## **Specifications**

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		40	V
Collector-to-Emitter Voltage	VCEO		18	V
Emitter-to-Base Voltage	VEBO		3	V
Collector Current	IC		50	mA
Collector Dissipation	PC		250	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

#### Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
	Symbol		min	typ	max	Offic
Collector Cutoff Current	ICBO	V <sub>CB</sub> =18V, I <sub>E</sub> =0			0.1	μΑ
Emitter Cutoff Current	IEBO	VEB=2V, IC=0			0.1	μΑ
DC Current Gain	hFE	V <sub>CE</sub> =10V, I <sub>C</sub> =5mA	60*		270*	
Gain-Bandwidth Product	fŢ	V <sub>CE</sub> =10V, I <sub>C</sub> =5mA		750		MHz
Output Capacitance	Cob	VCB=10V, f=1MHz		0.7	1.2	pF
Reverse Transfer Capacitance	Cre	V <sub>CB</sub> =10V, f=1MHz		0.45		pF

\*: The 2SC4432 is classified by 5mA hFE as follows:

Marking: RT

 Rank
 3
 4
 5

 hFE
 60 to 120
 90 to 180
 135 to 270

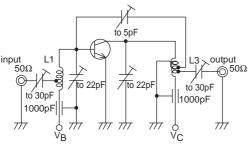
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Collector-to-Emitter Saturation Voltage	V <sub>CE</sub> (sat)	IC=10mA, IB=1mA			0.2	V
Base-to-Collector Time Constant	r <sub>bb</sub> 'C <sub>C</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =5mA, f=31.9MHz			23	ps
Power Gain	PG	VCE=10V, IC=10mA, f=100MHz		28		dB

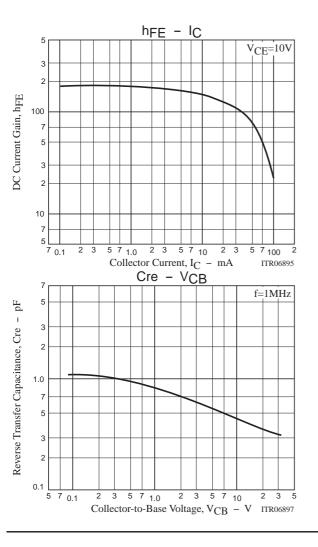
## **PG Test Circuit**

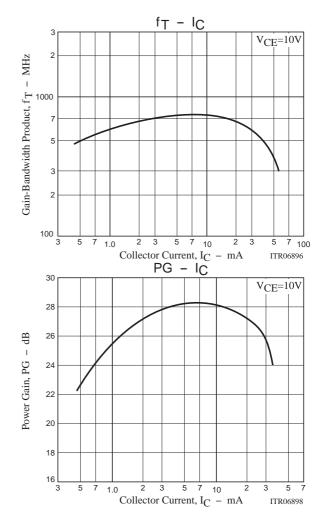


 $L1:1mm\varphi \ plated \ wire, \ 10mm\varphi \ 5T, \ pitch \ 15mm, \\ tap:2T \ from \ base \ side$ 

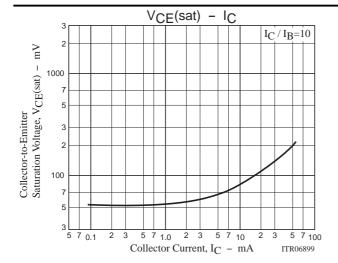
 $L2:1mm \phi \ plated \ wire, \ 10mm \phi \ 7T, \ pitch \ 10mm, \\ tap:2T \ from \ V_C \ side$ 

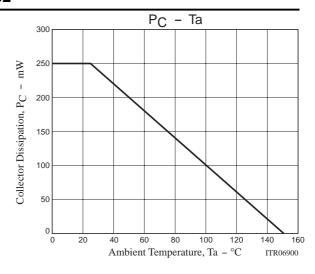
L3: 1mm\phi enamel wire, 10mm\phi 3T, pitch 10mm





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