

Ordering number : ENN3184A

NPN Epitaxial Planar Silicon Transistor

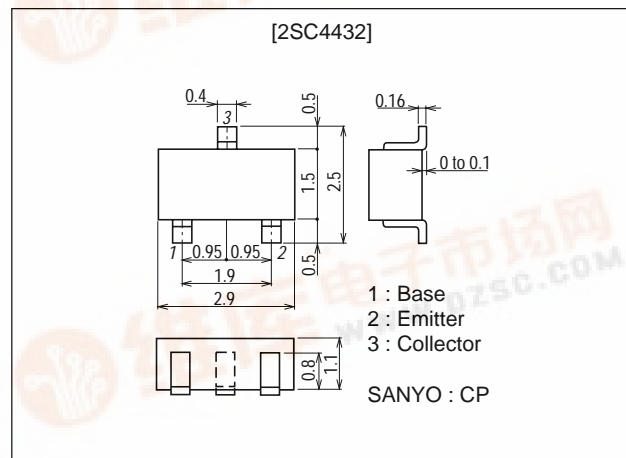
**SANYO****2SC4432****High-Frequency  
General-Purpose Amplifier Applications****Features**

- High power gain.
- High cutoff frequency.
- Small Cob, Cre.
- Ultrasmall-sized package permitting the 2SC4432-applied 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	V <sub>CB0</sub>		40	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		18	V
Emitter-to-Base Voltage	V <sub>EB0</sub>		3	V
Collector Current	I <sub>C</sub>		50	mA
Collector Dissipation	P <sub>C</sub>		250	mW
Junction Temperature	T <sub>J</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =18V, I <sub>E</sub> =0			0.1	μA
Emitter Cutoff Current	I <sub>EB0</sub>	V <sub>EB</sub> =2V, I <sub>C</sub> =0			0.1	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =5mA	60*		270*	
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =5mA		750		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, f=1MHz		0.7	1.2	pF
Reverse Transfer Capacitance	C <sub>re</sub>	V <sub>CB</sub> =10V, f=1MHz		0.45		pF

Marking : RT

\*: The 2SC4432 is classified by 5mA h<sub>FE</sub> as follows :

Rank	3	4	5
h <sub>FE</sub>	60 to 120	90 to 180	135 to 270

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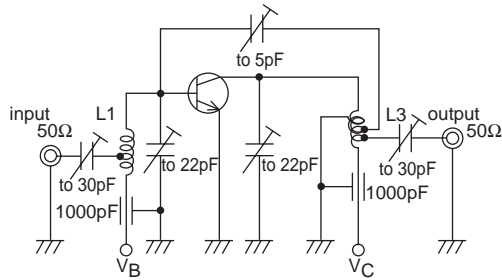
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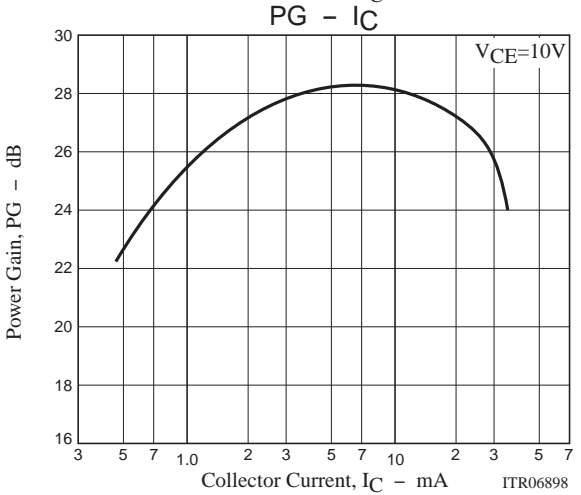
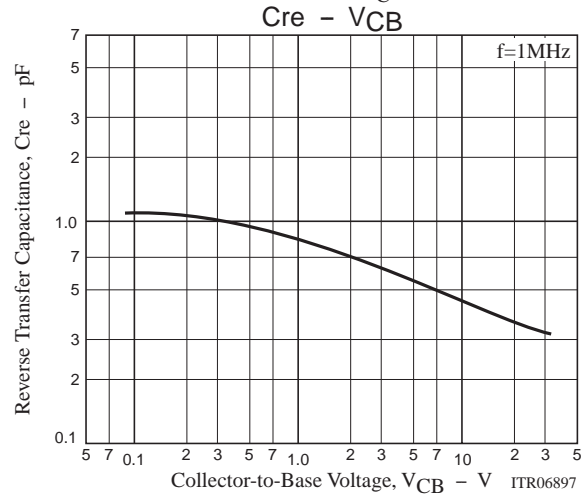
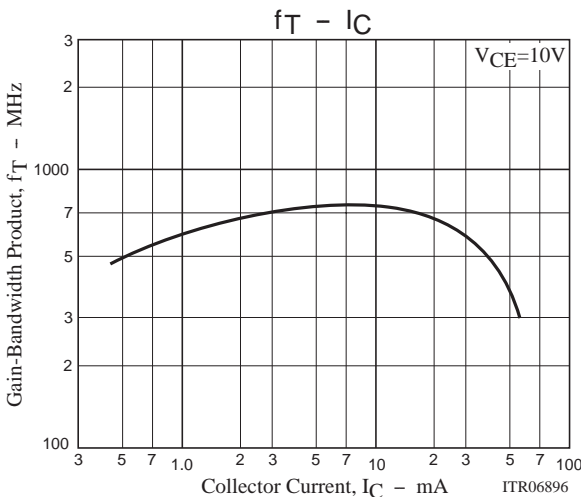
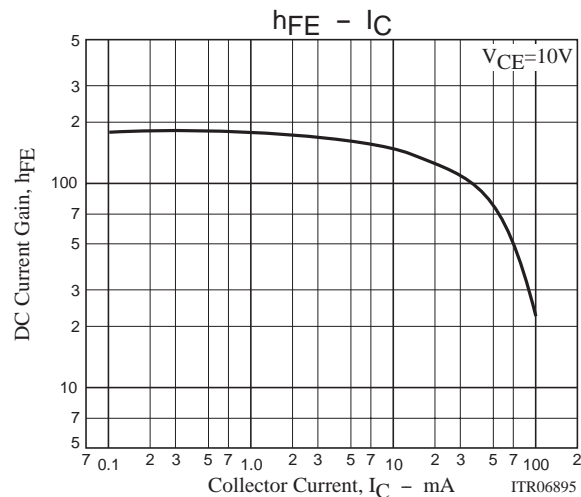
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}$ , $I_B=1\text{mA}$			0.2	V
Base-to-Collector Time Constant	$r_{bb'}C_C$	$V_{CE}=10\text{V}$ , $I_C=5\text{mA}$ , $f=31.9\text{MHz}$			23	ps
Power Gain	PG	$V_{CE}=10\text{V}$ , $I_C=10\text{mA}$ , $f=100\text{MHz}$		28		dB

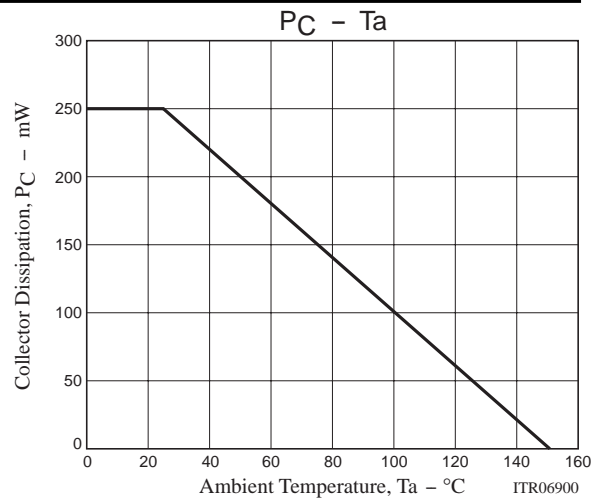
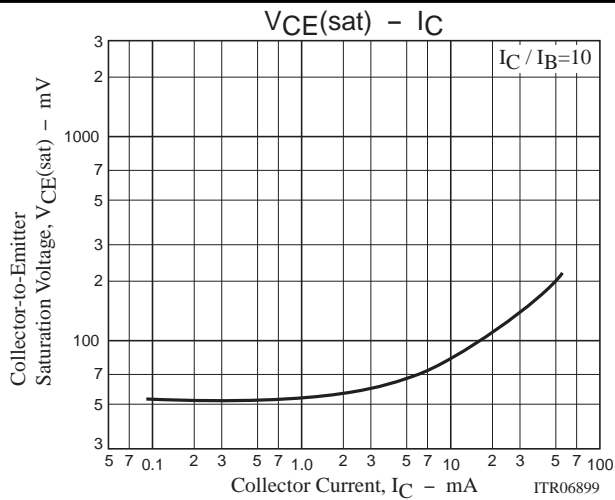
PG Test Circuit



- L1 : 1mmφ plated wire, 10mmφ 5T, pitch 15mm, tap : 2T from base side
- L2 : 1mmφ plated wire, 10mmφ 7T, pitch 10mm, tap : 2T from  $V_C$  side
- L3 : 1mmφ enamel wire, 10mmφ 3T, pitch 10mm



## 2SC4432



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