# Transistors 2SD471A

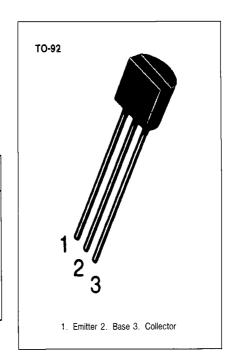


#### **AUDIO FREQUENCY POWER AMPLIFIER**

- Complement to KSB564A
- Collector Current Ic=1A
- Collector Dissipation Pc=800mW

## ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Characteristic	Symbol	Rating	Unit	
Collector-Base Voltage	V <sub>CBO</sub>	40	٧	
Collector-Emitter Voltage	V <sub>CEO</sub>	30	٧	
Emitter-Base Voltage	V <sub>EBO</sub>	5	V	
Collector Current	l <sub>c</sub>	1	Α	
Collector Dissipation	P <sub>c</sub>	800	mW	
Junction Temperature	Tj	150	°C	
Storage Temperature	Tstg	-55 ~ 150	•C	



## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Characteristic	Symbol	Test Conditions	Min	Тур	Max	Unit
Collector-Base Breakdown Voltage	BV <sub>CBO</sub>	$I_{C} = 100 \mu A, I_{E} = 0$	40			V
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	$I_{C} = 10 \text{mA}, I_{B} = 0$	30			V
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	$I_E = 100 \mu A$ , $I_C = 0$	5			V
Collector Cut-off Current	I <sub>CBO</sub>	V <sub>CB</sub> =30V, I <sub>E</sub> =0		1	0.1	μΑ
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> =100mA	70		400	,
Collector-Emitter Saturation Voltage	V <sub>CE</sub> (sat)	$I_{C} = 1A, I_{B} = 0.1A$			0.5	V
Base-Emitter Saturation Voltage	V <sub>BE</sub> (sat)	$I_{C} = 1A, I_{B} = 0.1A$			1.2	l v
Current Gain-Band width Product	fT	V <sub>CE</sub> = 6V, I <sub>C</sub> = 10mA		130		MHz
Output Capacitance	Cob	V <sub>CB</sub> =6V, I <sub>E</sub> =0, f=1MHz		16		pF

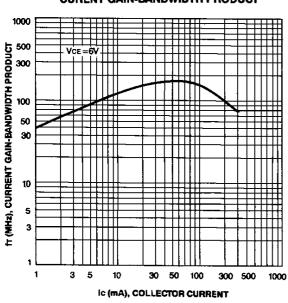
### **h**<sub>FE</sub> CLASSIFICATION

Classification	0	Y	G
h <sub>FE</sub>	70-140	120-240	200-400

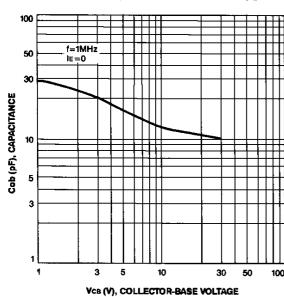


#### STATIC CHARACTERISTIC 1.0 0.9 1s=5,0mA 0.8 lв=4.0mA lв **⇒3.5m**A Ic (A), COLLECTOR CURRENT 0.7 0.6 0.5 lв = 2.0mA 0.4 lB = 1.5mA0.3 Íв =1.0mA 0.2 IB = 0.5mA 0.1 0 0 2 5 8 9 10 VCE (V), COLLECTOR-EMITTER VOLTAGE

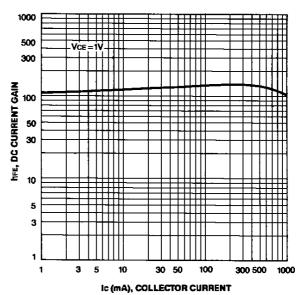




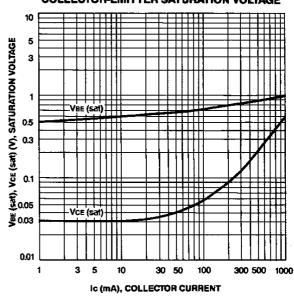
#### **COLLECTOR OUTPUT CAPACITANCE**



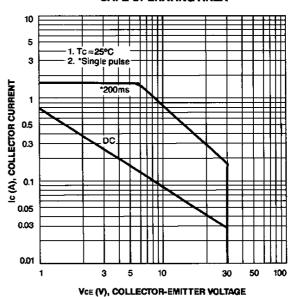
#### DC CURRENT GAIN



# BASE-EMITTER SATURATION VOLTAGE COLLECTOR-EMITTER SATURATION VOLTAGE



#### SAFE OPERATING AREA



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