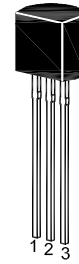


# 2SA928

## PNP Silicon Epitaxial Planar Transistor

for audio power amplifier

The transistor is subdivided into two groups, O and Y, according to its DC current gain.



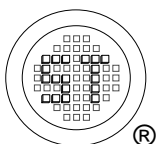
1. Emitter 2. Collector 3. Base  
TO-92 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	30	V
Collector Emitter Voltage	$-V_{CEO}$	30	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	2	A
Power Dissipation	$P_{tot}$	1	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $-V_{CE} = 2\text{ V}$ , $-I_C = 500\text{ mA}$	Current Gain Group O	$h_{FE}$	100	-	200	-
	Current Gain Group Y	$h_{FE}$	160	-	320	-
Collector Base Cutoff Current at $-V_{CB} = 30\text{ V}$	$-I_{CBO}$	-	-	100	nA	
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	100	nA	
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	30	-	-	V	
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$	$-V_{(BR)CEO}$	30	-	-	V	
Emitter Base Breakdown Voltage at $-I_E = 1\text{ mA}$	$-V_{(BR)EBO}$	5	-	-	V	
Collector Emitter Saturation Voltage at $-I_C = 1.5\text{ A}$ , $-I_B = 30\text{ mA}$	$-V_{CE(sat)}$	-	-	2	V	
Base Emitter Voltage at $-V_{CE} = 2\text{ V}$ , $-I_C = 500\text{ mA}$	$-V_{BE}$	-	-	1	V	
Gain Bandwidth Product at $V_{CE} = 2\text{ V}$ , $I_C = 500\text{ mA}$	$f_T$	-	120	-	MHz	
Collector Output Capacitance at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	48	-	pF	



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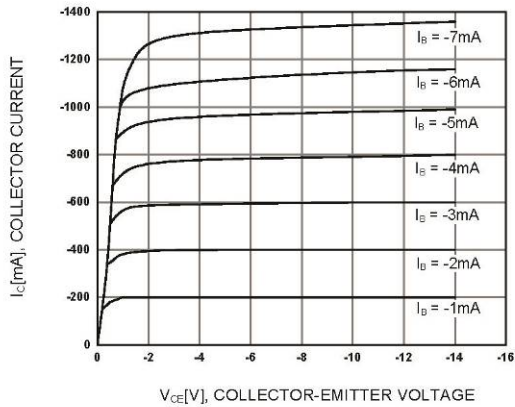


Figure 1. Static Characteristic

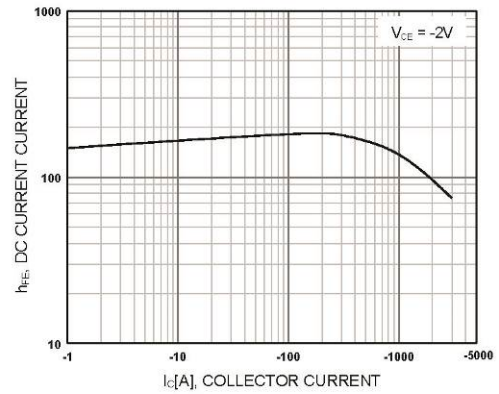


Figure 2. DC current Gain

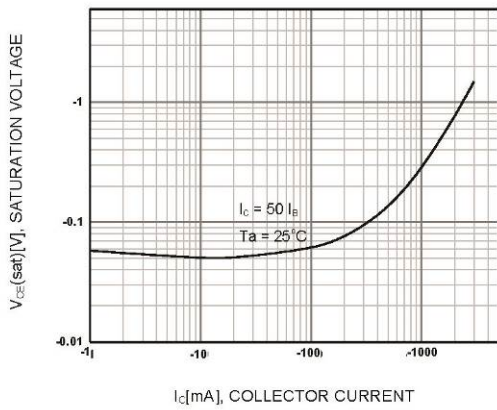


Figure 3. Collector-Emitter Saturation Voltage

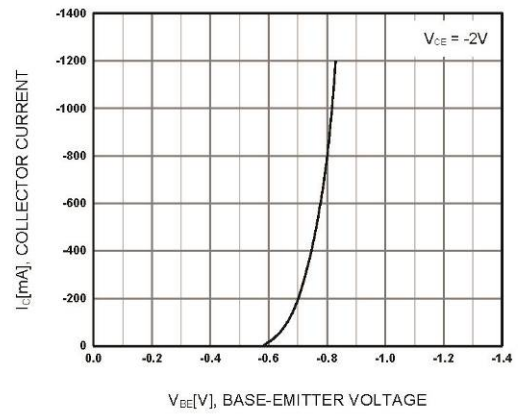


Figure 4. Base-Emitter On Voltage

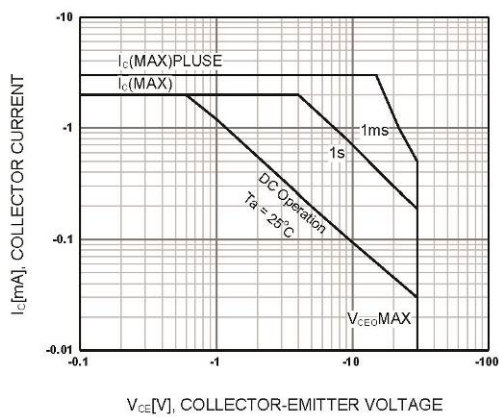


Figure 5. Safe Operating Area

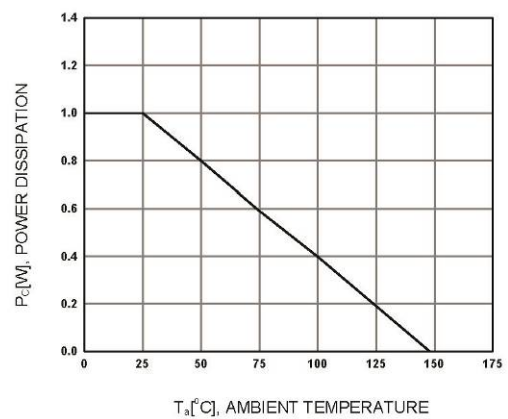
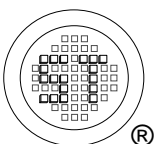


Figure 6. Power Derating



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