



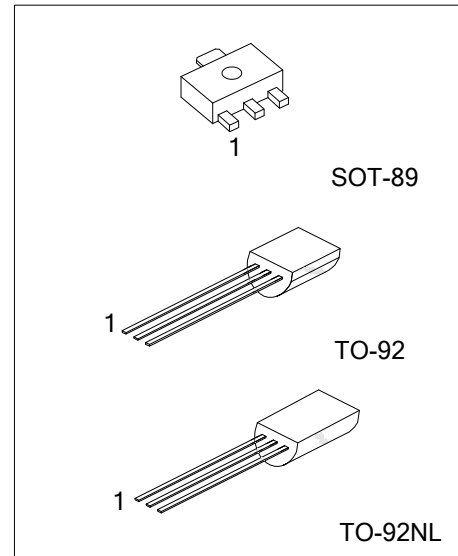
## 2SA928A

## PNP SILICON TRANSISTOR

### AUDIO POWER AMPLIFIER

#### FEATURES

- \* Collector Dissipation  $P_C=1$  W
- \* 3 W Output Application
- \* Complement of 2SC2328A



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SA928AL-x-AB3-R	2SA928AG-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SA928AL-x-T92-B	2SA928AG-x-T92-B	TO-92	E	C	B	Tape Box
2SA928AL-x-T92-K	2SA928AG-x-T92-K	TO-92	E	C	B	Bulk
2SA928AL-x-T9N-B	2SA928AG-x-T9N-B	TO-92NL	E	C	B	Tape Box
2SA928AL-x-T9N-K	2SA928AG-x-T9N-K	TO-92NL	E	C	B	Bulk

<p>2SA928AG-x-AB3-R</p>	<p>(1) Packing Type (2) Package Type (3) Rank (4) Green Package</p>	<p>(1) R: Tape Reel, B: Tape Box, K: Bulk (2) AB3: SOT-89, T92: TO-92, T9N: TO-92NL (3) x: refer to Classification of <math>h_{FE}</math> (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING

SOT-89	TO-92	TO-92NL

■ **ABSOLUTE MAXIMUM RATINGS** ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	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
Collector Dissipation	SOT-89	$P_C$	0.5	W
	TO-92/TO-92NL		1.0	W
Junction Temperature		$T_J$	+150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

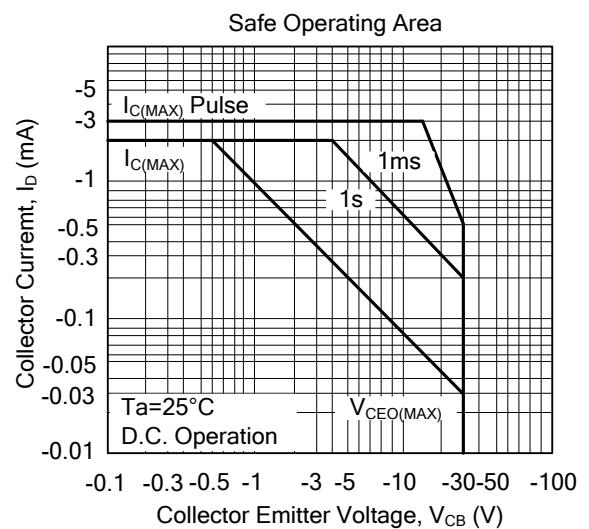
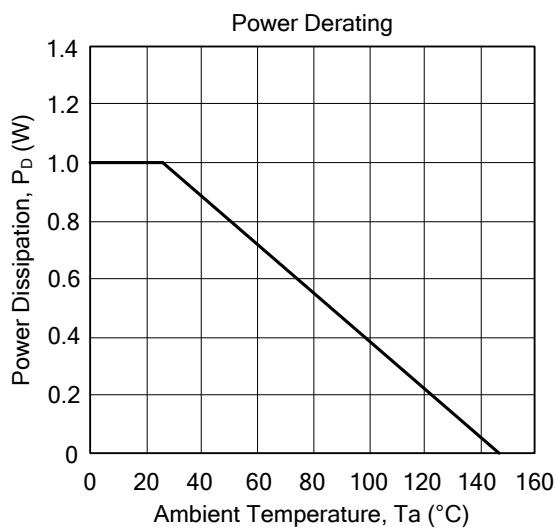
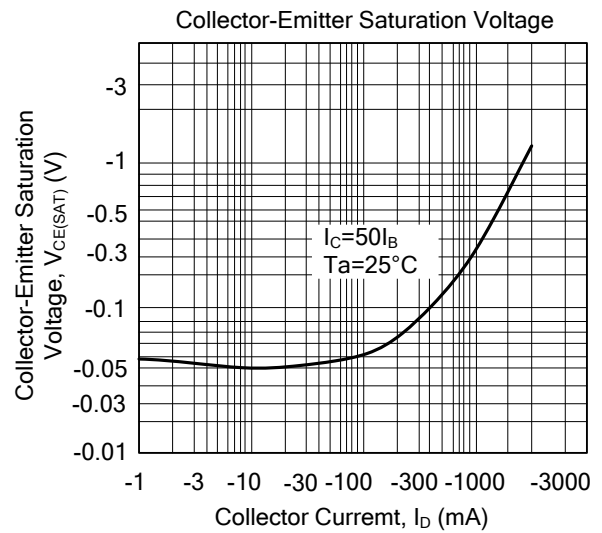
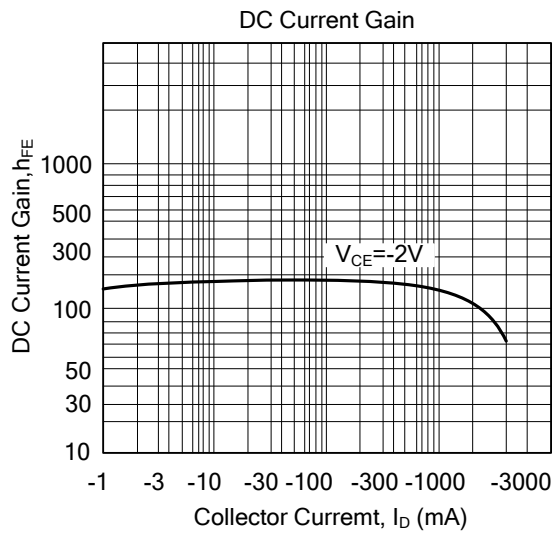
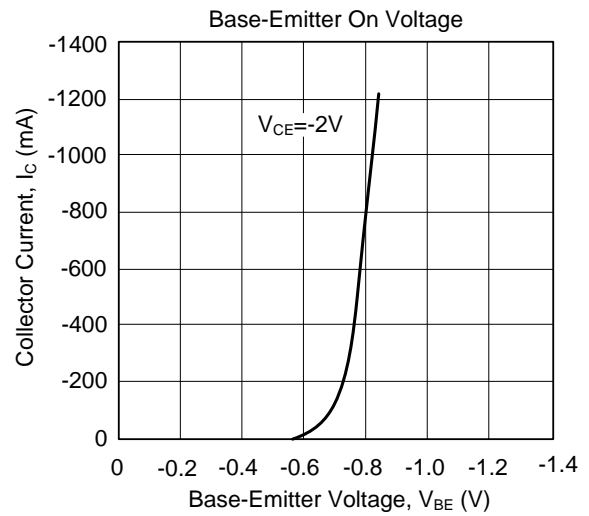
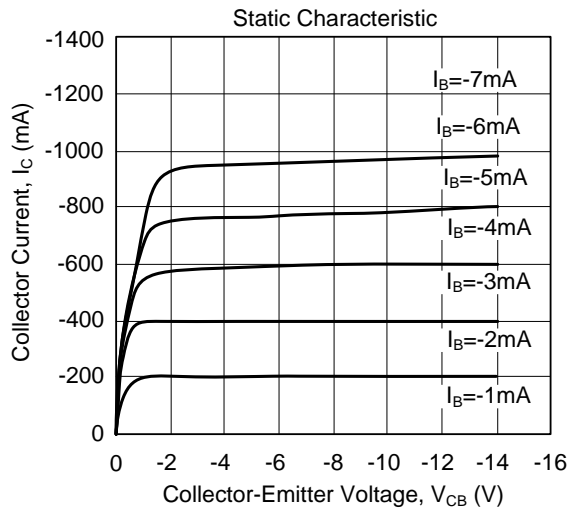
■ **ELECTRICAL CHARACTERISTICS** ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = -100\mu\text{A}$ , $I_E = 0$	-30			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = -1\text{mA}$ , $I_B = 0$	-30			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = -1\text{mA}$ , $I_C = 0$	-5			V
Collect Cut-off Current	$I_{CBO}$	$V_{CB} = -30\text{V}$ , $I_E = 0$			-100	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{BE} = -5\text{V}$ , $I_C = 0$			-100	nA
DC Current Ratio	$h_{FE}$	$V_{CE} = -2\text{V}$ , $I_C = -500\text{mA}$	100		320	
Base-Emitter on Voltage	$V_{BE(ON)}$	$V_{CE} = -2\text{V}$ , $I_C = -500\text{mA}$			-1	V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = -1.5\text{A}$ , $I_B = -30\text{mA}$			-2	V
Output Capacitance	$C_{OB}$	$V_{CB} = -10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$		48		pF
Current Gain Bandwidth Product	$f_T$	$V_{CE} = -2\text{V}$ , $I_C = -500\text{mA}$		120		MHz

■ **CLASSIFICATION OF  $h_{FE}$**

RANK	Q	Y
RANGE	100 ~ 200	160 ~ 320

## TYPICAL CHARACTERISTICS



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