



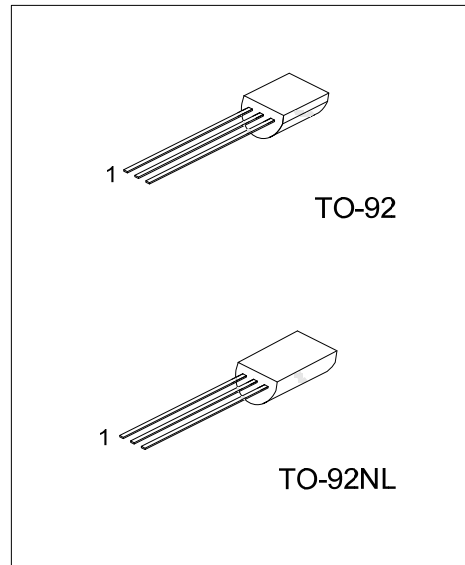
## 2SC2328A

## NPN EPITAXIAL SILICON TRANSISTOR

### AUDIO POWER AMPLIFIER

#### ■ FEATURES

- \* Collector Dissipation  $P_c=1$  W
- \* 3 W Output Application
- \* Complement of 2SA928A



#### ■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC2328AL-x-T92-B	2SC2328AG-x-T92-B	TO-92	E	C	B	Tape Box
2SC2328AL-x-T92-K	2SC2328AG-x-T92-K	TO-92	E	C	B	Bulk
2SC2328AL-x-T92-R	2SC2328AG-x-T92-R	TO-92	E	C	B	Tape Reel
2SC2328AL-x-T9N-K	2SC2328AG-x-T9N-K	TO-92NL	E	C	B	Bulk
2SC2328AL-x-T9N-B	2SC2328AG-x-T9N-B	TO-92NL	E	C	B	Tape Box

Note: Pin Assignment: E: Emitter C: Collector B: Base

<p>2SC2328AL-x-T92-K</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Lead Free</p>	<p>(1) B: Tape Box, K: Bulk (2) T92: TO-92, T9N: TO-92NL (3) x: refer to Classification of <math>h_{FE}</math> (4) G: Halogen Free, L: Lead Free</p>
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■ ABSOLUTE MAXIMUM RATING ( $T_A=25^{\circ}\text{C}$ , 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 Dissipation	TO-92	$P_C$	500	mW
	TO-92NL		625	
Collector Current		$I_C$	2	A
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	$BV_{CEO}$	$I_C=10\text{mA}, I_B=0$	30			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E=1\text{mA}, I_C=0$	5			V
Collector 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 Gain (Note)	$h_{FE}$	$V_{CE}=2\text{V}, I_C=500\text{mA}$	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	$V_{CE(SAT)}$	$I_C=1.5\text{A}, I_B=0.03\text{A}$			2	V
Output Capacitance	$C_{OB}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		30		pF
Current Gain Bandwidth Product	$f_T$	$V_{CE}=2\text{V}, I_C=500\text{mA}$		120		MHz

■ CLASSIFICATION OF  $h_{FE}$

RANK	O	Y
RANGE	100-200	160-320

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