



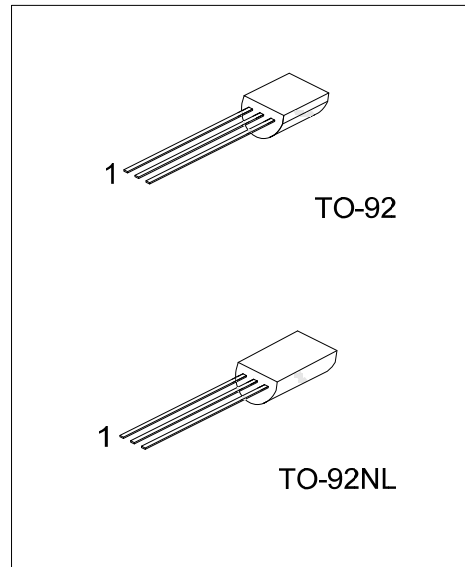
**2SC2328A**

**NPN EPITAXIAL SILICON TRANSISTOR**

**AUDIO POWER AMPLIFIER**

■ **FEATURES**

- \* Collector Dissipation Pc=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-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>2SC2328AG-x-T92-B</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Green Package</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 and Lead Free, L: Lead Free</p>
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■ **MARKING**

TO-92	TO-92NL
<p>UTC C2328A □ Rank ← □ □ □ → Date Code L: Lead Free G: Halogen Free</p>	<p>UTC C2328A □ Date Code ← □ □ □ → L: Lead Free G: Halogen Free</p>



# 2SC2328A

## NPN EPITAXIAL SILICON TRANSISTOR

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

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	$V_{\text{CBO}}$	30	V
Collector-Emitter Voltage	$V_{\text{CEO}}$	30	V
Emitter-Base Voltage	$V_{\text{EBO}}$	5	V
Collector Dissipation	TO-92	500	mW
	TO-92NL	625	
Collector Current	$I_{\text{C}}$	2	A
Junction Temperature	$T_{\text{J}}$	+150	$^{\circ}\text{C}$
Storage Temperature	$T_{\text{STG}}$	-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	$BV_{\text{CBO}}$	$I_{\text{C}}=100\mu\text{A}, I_{\text{E}}=0$	30			V
Collector-Emitter Breakdown Voltage	$BV_{\text{CEO}}$	$I_{\text{C}}=10\text{mA}, I_{\text{B}}=0$	30			V
Emitter-Base Breakdown Voltage	$BV_{\text{EBO}}$	$I_{\text{E}}=1\text{mA}, I_{\text{C}}=0$	5			V
Collector Cut-Off Current	$I_{\text{CBO}}$	$V_{\text{CB}}=30\text{V}, I_{\text{E}}=0$			100	nA
Emitter Cut-Off Current	$I_{\text{EBO}}$	$V_{\text{BE}}=5\text{V}, I_{\text{C}}=0$			100	nA
DC Current Gain (Note)	$h_{\text{FE}}$	$V_{\text{CE}}=2\text{V}, I_{\text{C}}=500\text{mA}$	100		320	
Base-Emitter On Voltage	$V_{\text{BE(ON)}}$	$V_{\text{CE}}=2\text{V}, I_{\text{C}}=500\text{mA}$			1	V
Collector-Emitter Saturation Voltage	$V_{\text{CE(SAT)}}$	$I_{\text{C}}=1.5\text{A}, I_{\text{B}}=0.03\text{A}$			2	V
Output Capacitance	$C_{\text{OB}}$	$V_{\text{CB}}=10\text{V}, I_{\text{E}}=0, f=1\text{MHz}$		30		pF
Current Gain Bandwidth Product	$f_{\text{T}}$	$V_{\text{CE}}=2\text{V}, I_{\text{C}}=500\text{mA}$		120		MHz

### ■ CLASSIFICATION OF $h_{\text{FE}}$

RANK	O	Y
RANGE	100-200	160-320

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