



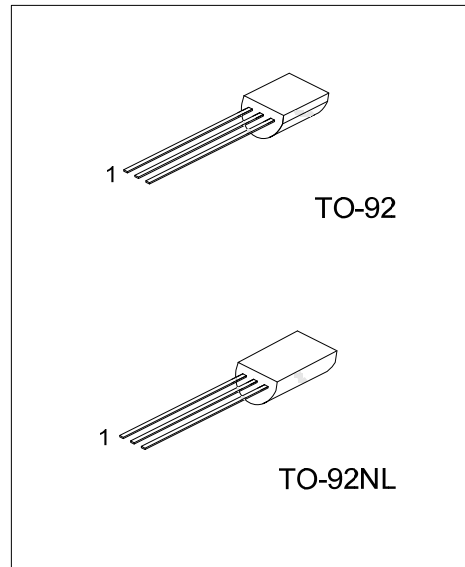
2SC2328A

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-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 h_{FE} (4) L: Lead Free, G: Halogen Free</p>
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■ MARKING

TO-92	TO-92NL

2SC232A

NPN EPITAXIAL SILICON TRANSISTOR

■ 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	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}	$I_{\text{C}}=100\mu\text{A}, I_{\text{E}}=0$	30			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_{\text{C}}=10\text{mA}, I_{\text{B}}=0$	30			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_{\text{E}}=1\text{mA}, I_{\text{C}}=0$	5			V
Collector Cut-Off Current	I_{CBO}	$V_{\text{CB}}=30\text{V}, I_{\text{E}}=0$			100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{\text{BE}}=5\text{V}, I_{\text{C}}=0$			100	nA
DC Current Gain (Note)	h_{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_{OB}	$V_{\text{CB}}=10\text{V}, I_{\text{E}}=0, f=1\text{MHz}$		30		pF
Current Gain Bandwidth Product	f_{T}	$V_{\text{CE}}=2\text{V}, I_{\text{C}}=500\text{mA}$		120		MHz

■ CLASSIFICATION OF h_{FE}

RANK	O	Y
RANGE	100-200	160-320

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