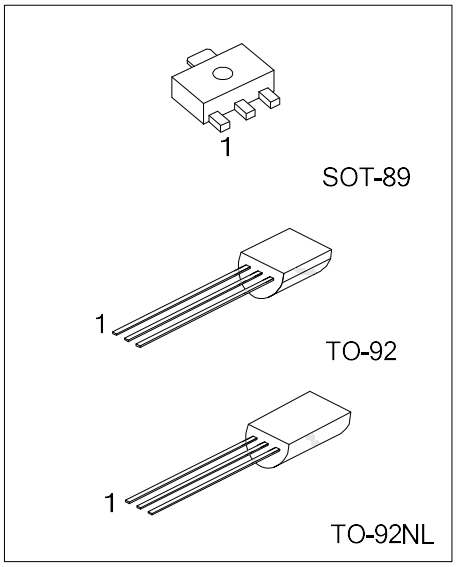
2SA928A

PNP SILICON TRANSISTOR

AUDIO POWER AMPLIFIER



■ FEATURES

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

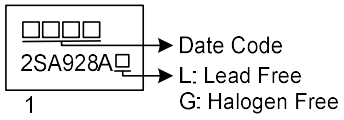
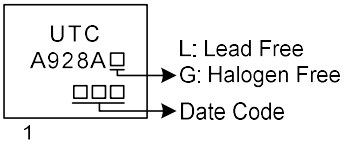
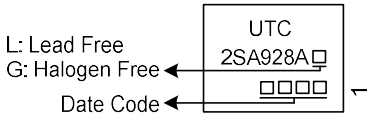
■ ORDERING INFORMATION

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

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

2SA928AG-x-AB3-R (1)Packing Type (2)Package Type (3)Rank (4)Green Package	(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 h_{FE} (4) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

SOT-89	TO-92	TO-92NL
		

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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	°C
Storage Temperature		T_{STG}	-55 ~ +150	°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°C, unless otherwise specified)

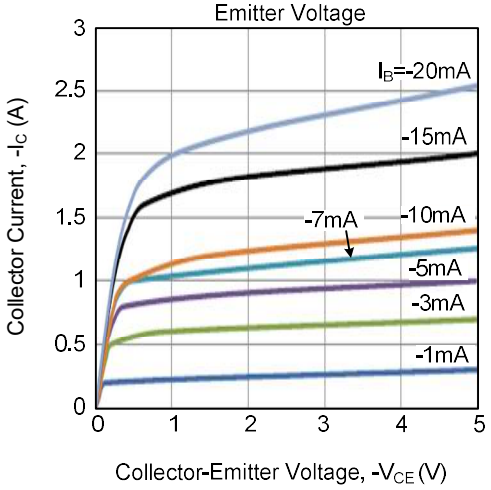
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	I_C =-100μA, I_E =0	-30			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C =-1mA, I_B =0	-30			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E =-1mA, I_C =0	-5			V
Collect Cut-off Current	I_{CBO}	V_{CB} =-30V,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

■ CLASSIFICATION OF h_{FE}

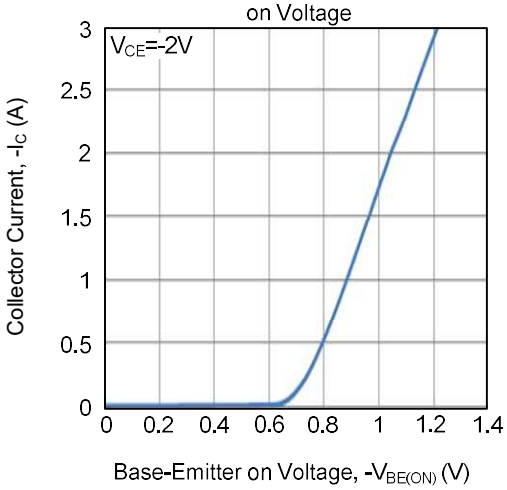
RANK	Q	Y
RANGE	100 ~ 200	160 ~ 320

■ TYPICAL CHARACTERISTICS

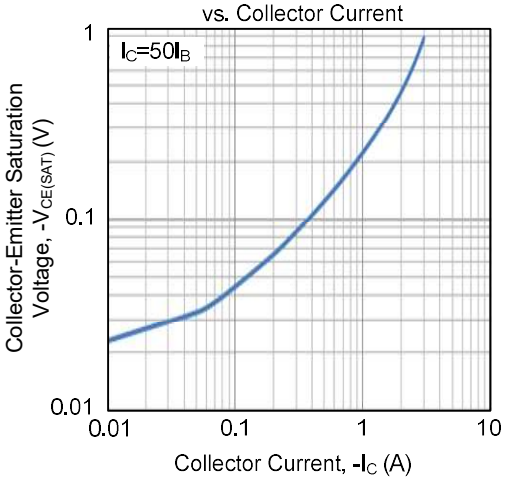
Collector Current vs. Collector-Emitter Voltage



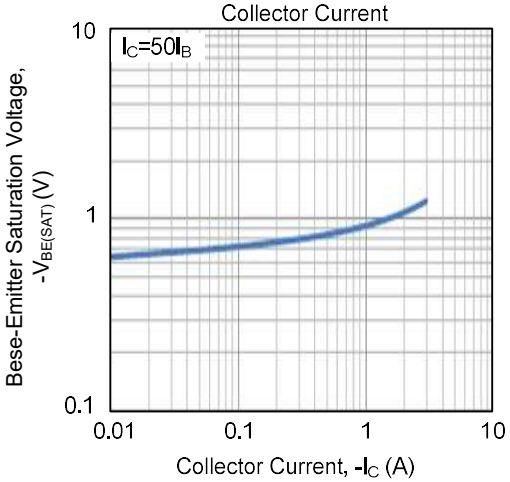
Collector Current vs. Base-Emitter on Voltage



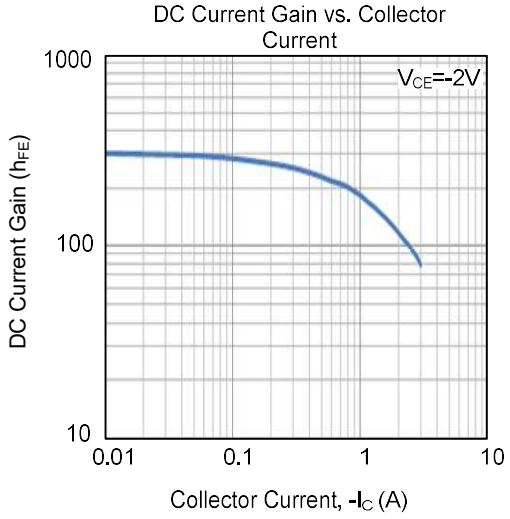
Collector-Emitter Saturation Voltage vs. Collector Current



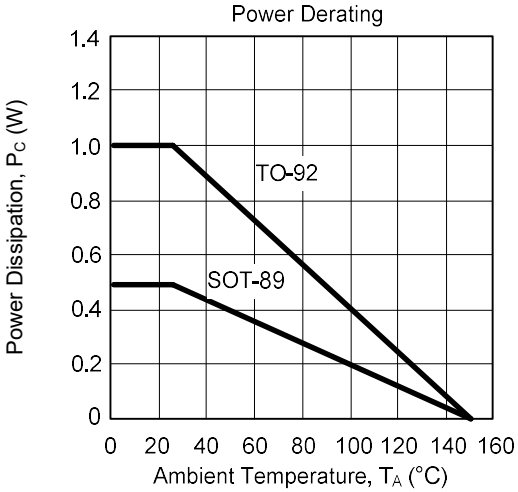
Bese-Emitter Saturation Voltage vs. Collector Current



DC Current Gain vs. Collector Current



Power Derating



■ TYPICAL CHARACTERISTICS