



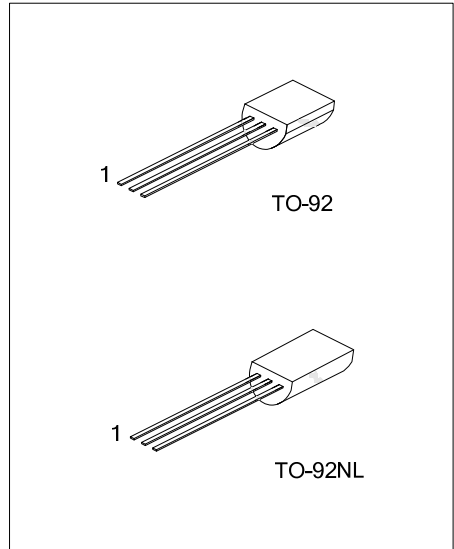
# 2SD468

## NPN SILICON TRANSISTOR

### LOW FREQUENCY POWER AMPLIFIER

■ FEATURES

- \* Low frequency power amplifier
- \* Complement to 2SB562



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SD468L-x-T92-B	2SD468G-x-T92-B	TO-92	E	C	B	Tape Box
2SD468L-x-T92-K	2SD468G-x-T92-K	TO-92	E	C	B	Bulk
2SD468L-x-T9N-B	2SD468G-x-T9N-B	TO-92NL	E	C	B	Tape Box
2SD468L-x-T9N-K	2SD468G-x-T9N-K	TO-92NL	E	C	B	Bulk

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

<p>2SD468L-x-T92-B</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) L: Lead Free, G: Halogen Free and Lead Free</p>
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■ MARKING

TO-92	TO-92NL

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

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	$V_{CBO}$	25	V
Collector-Emitter Voltage	$V_{CEO}$	20	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	1	A
Collector Peak Current	$I_{CP}$	1.5	A
Collector Power Dissipation	$P_C$	0.9	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	$BV_{CBO}$	$I_C=10\mu\text{A}$ , $I_E=0$	25			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=1\text{mA}$ , $R_{BE}=\infty$	20			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E=10\mu\text{A}$ , $I_C=0$	5			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=20\text{V}$ , $I_E=0$			1	$\mu\text{A}$
DC Current Transfer Ratio	$h_{FE}$	$V_{CE}=2\text{V}$ , $I_C=0.5\text{A}$ (Note)	85		240	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=0.8\text{A}$ , $I_B=0.08\text{A}$ (Note)		0.2	0.5	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE}=2\text{V}$ , $I_C=0.5\text{A}$ (Note)		0.79	1	V
Gain Bandwidth Product	$f_T$	$V_{CE}=2\text{V}$ , $I_C=0.5\text{A}$ (Note)		190		MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$		22		pF

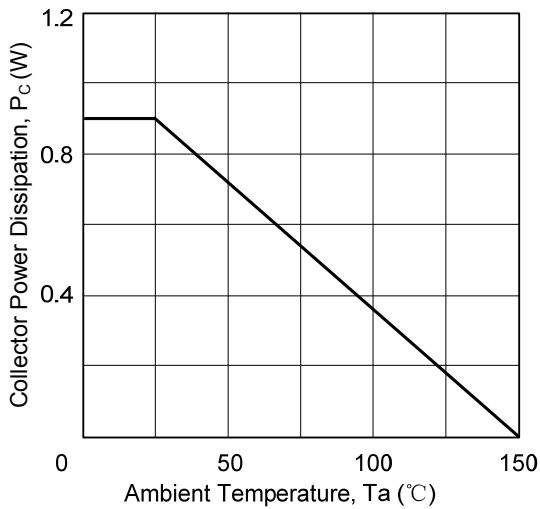
Note: Pulse test

■ CLASSIFICATION OF  $h_{FE}$

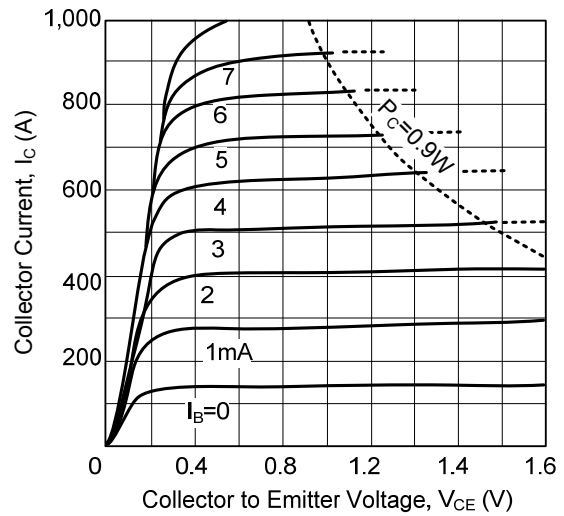
RANK	B	C
RANGE	85 - 170	120 - 240

## ■ TYPICAL CHARACTERISTICS

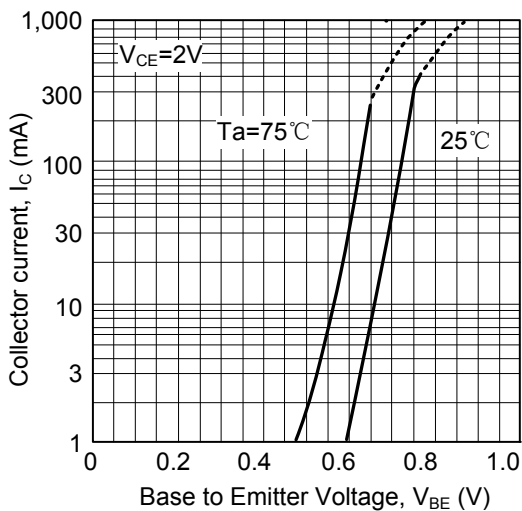
Maximum Collector Dissipation Curve



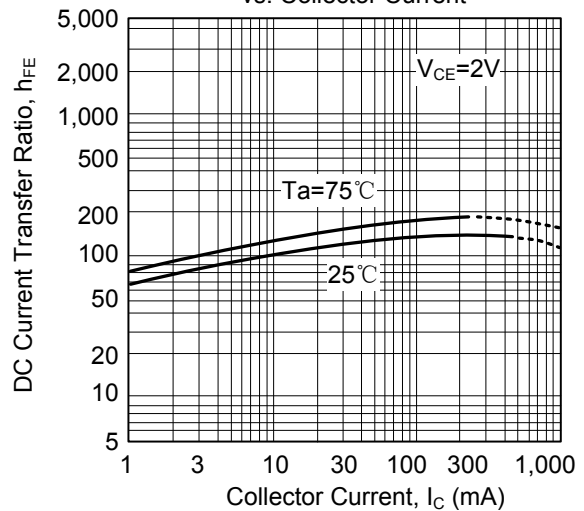
Typical Output Characteristics



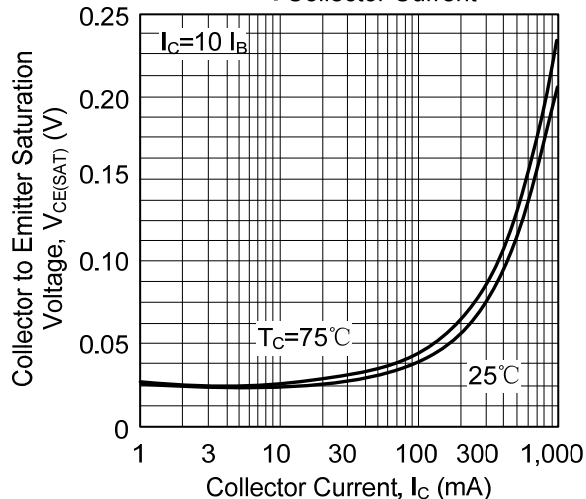
Typical Transfer Characteristics



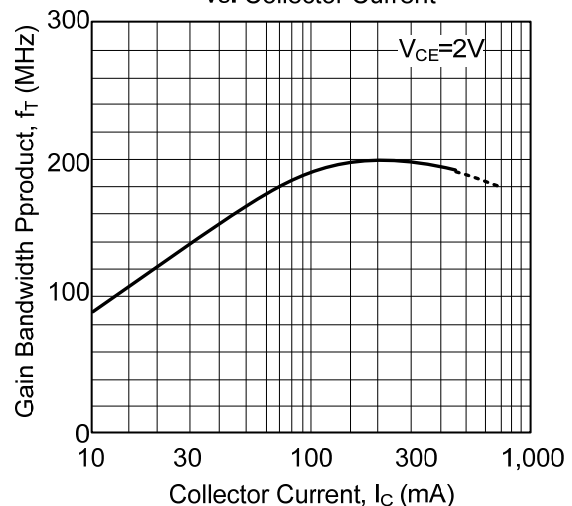
DC Current Transfer Ratio vs. Collector Current



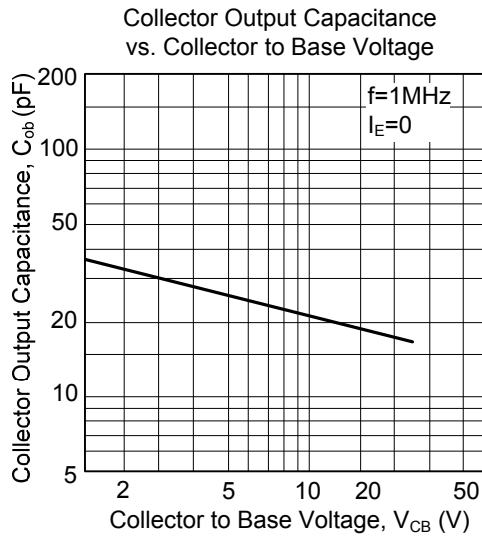
Collector to Emitter Saturation Voltage vs. Collector Current



Gain Bandwidth Product vs. Collector Current



■ TYPICAL CHARACTERISTICS(Cont.)



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