



DESCRIPTION

The 2SA1162 is available in SOT-23 package.

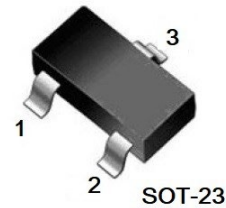
FEATURE

- Low Noise: NF=1dB (Typ.),10dB (Max).
- Complementary to 2SC2712.
- Small Package.
- Available in SOT-23 package

ORDERING INFORMATION

Package Type	Part Number
SOT-23	2SA1162-O
	2SA1162-Y
	2SA1162-G
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION



HFE CLASSIFICATION

Classification	hFE
O	70~140
Y	120~240
G	200~400

Pin #	Description
1	BASE
2	EMITTER
3	COLLECTOR

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

V_{CBO} , Collector-Base Voltage	-50V
V_{CEO} , Collector-Emitter Voltage	-50V
V_{EBO} , Emitter-Base Voltage	-5V
I_C , Collector Current -Continuous	-150mA
P_C , Collector Power Dissipation	150mW
T_j , Junction Temperature	150°C
T_{stg} , Storage Temperature	-55°C ~ + 125°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS $T_a = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}$, $I_E = 0$	-50	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}$, $I_B = 0$	-50	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}$, $I_C = 0$	5	-	-	V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -50\text{V}$, $I_E = 0$	-	-	-0.10	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_E = 0$	-	-	-0.10	μA
DC Current Gain	h_{FE}	$V_{CE} = -6\text{V}$, $I_C = -2\text{mA}$	70	-	400	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}$, $I_B = -10\text{mA}$	-	-	-0.30	V
Transition Frequency	f_T	$V_{CE} = -10\text{V}$, $I_C = -1\text{mA}$	80	-	-	MHz
Collector Base Capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$	-	-	7	PF
Noise Figure	NF	$V_{CE} = -6\text{V}$, $I_C = 0.1\text{mA}$, $R_S = 10\text{K}\Omega$, $f = 1\text{KMHz}$	-	-	10	dB



TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. I_C vs. V_{CE}

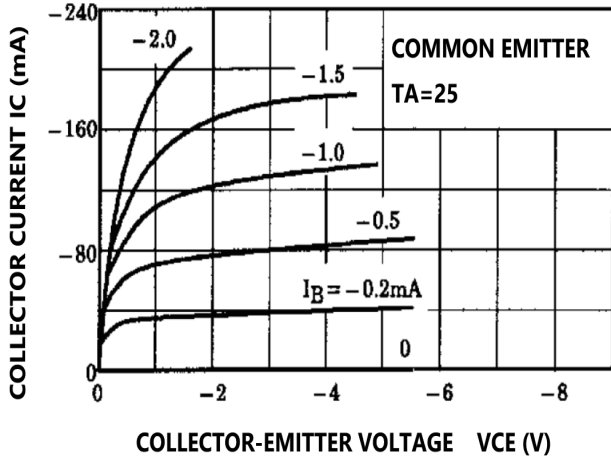


Fig 2. f_T vs. I_C

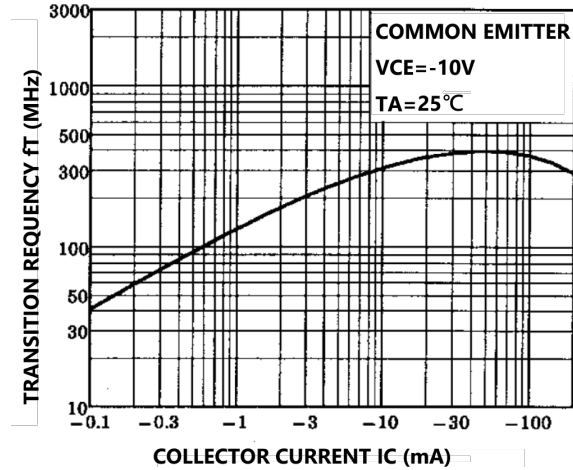


Fig 3. h_{FE} vs. I_C

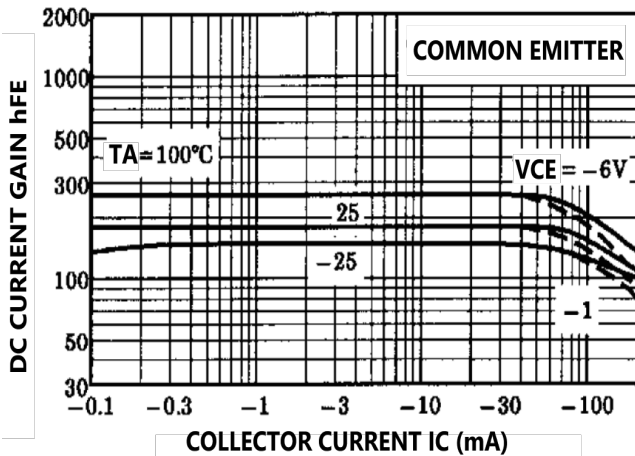


Fig 4. I_B vs. V_{BE}

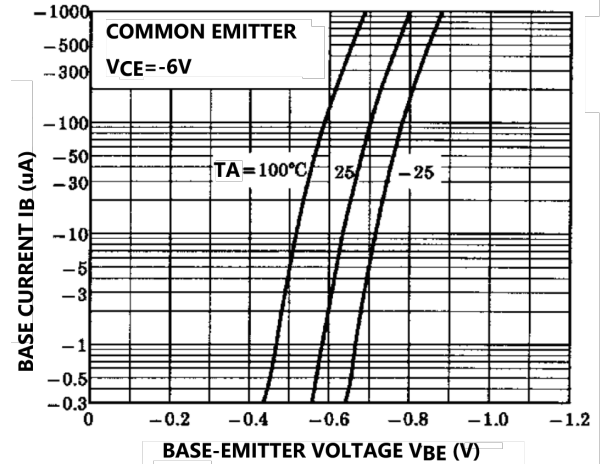


Fig 5. $V_{CE(sat)}$ vs. I_C

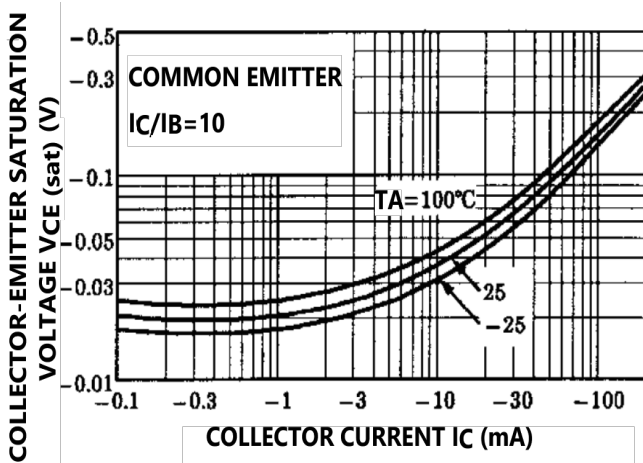
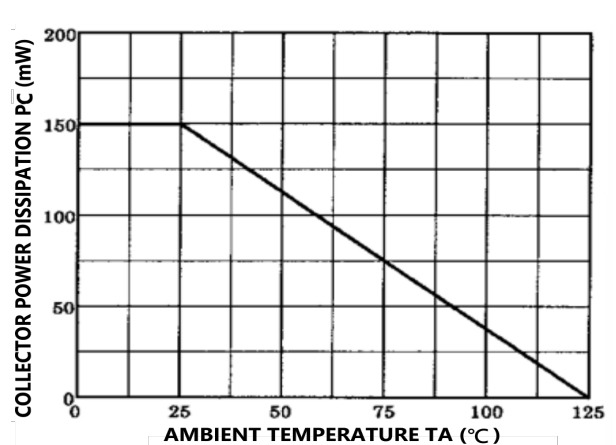


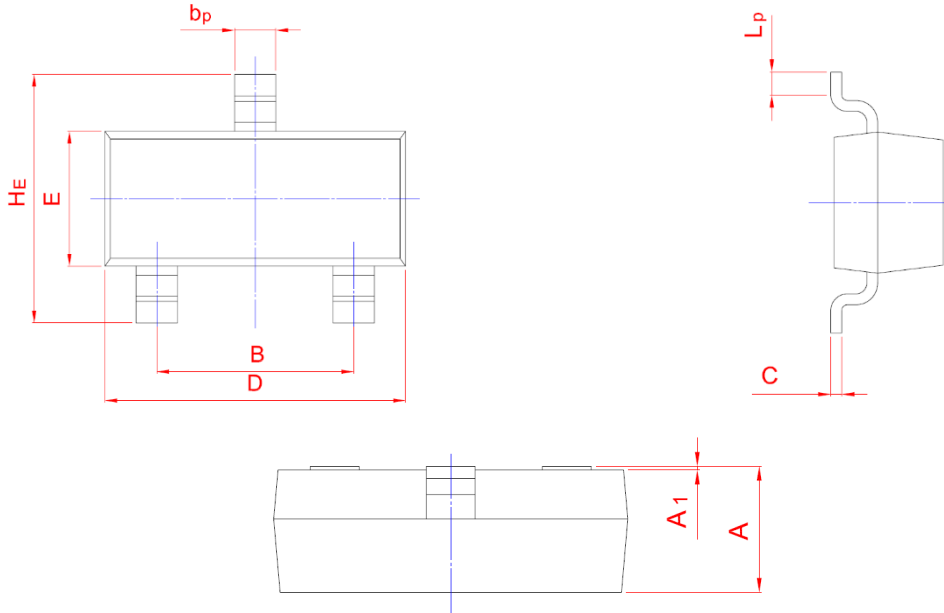
Fig 6. P_C vs. T_A





PACKAGE INFORMATION

Dimension in SOT-23 Package



Symbol	Millimeters (mm)	
	Min.	Max.
A	0.950	1.400
A1	0.100	0.013
B	1.780	2.040
b _p	0.340	0.500
C	0.080	0.190
D	2.700	3.100
E	1.200	1.650
H _E	2.200	3.000
L _P	0.200	0.500



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