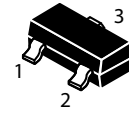
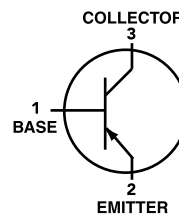


### PNP General Purpose Transistors

**(Pb)** Lead(Pb)-Free



**SOT-23**

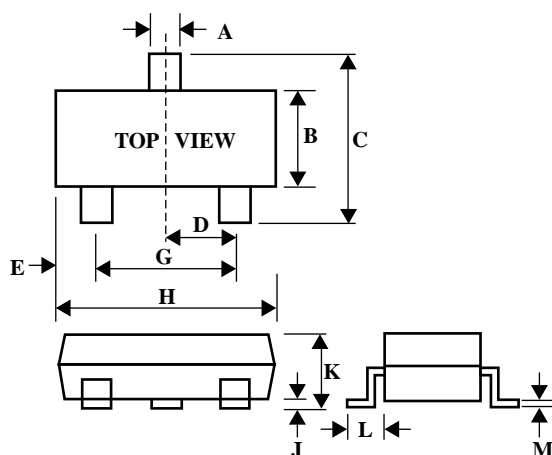
#### Features:

- \* High current capacity in compact package.
- \* Epitaxial planar type.
- \* We declare that the material of product compliance with RoHS requirements.

#### MAXIMUM RATINGS(T<sub>a</sub>=25°C)

Rating	Symbol	Value	Unit
Collector-Base Voltage	V <sub>CB0</sub>	-40	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-32	V
Emitter-Base Voltage	V <sub>EBO</sub>	-5.0	V
Collector Current - Continuous	I <sub>C</sub>	-800	mA
Total Device Dissipation T <sub>A</sub> =25°C	P <sub>D</sub>	200	mW
Junction Temperature	T <sub>j</sub>	+150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

#### SOT-23 Outline Dimension



**SOT-23**

Dim	Min	Max
A	0.35	0.51
B	1.19	1.40
C	2.10	3.00
D	0.85	1.05
E	0.46	1.00
G	1.70	2.10
H	2.70	3.10
J	0.01	0.13
K	0.89	1.10
L	0.30	0.61
M	0.076	0.25

## ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage $I_C = -50\mu A, I_E = 0A$	$V_{(BR)CBO}$	-40	-	-	V
Collector-Emitter Breakdown Voltage $I_C = -1mA, I_B = 0A$	$V_{(BR)CEO}$	-32	-	-	V
Emitter-Base Breakdown Voltage $I_E = -50\mu A, I_C = 0$	$V_{(BR)EBO}$	-5.0	-	-	V
Collector Cuto Current $V_{CB} = -20V, I_E = 0A$	$I_{CBO}$	-	-	-0.5	$\mu A$
Emitter Cuto Current $V_{EB} = -4V, I_C = 0A$	$I_{EBO}$	-	-	-0.5	$\mu A$

## ON CHARACTERISTICS

Collector-Emitter Saturation Voltage $I_C = -500mA, I_B = -50mA$	$V_{CE(sat)}$	-	-	-0.5	V
DC Current Transfer Ration $V_{CE} = -3V, I_C = -100mA$	$h_{FE}$	120	-	390	

## SMALL-SIGNAL CHARACTERISTICS

Transition frequency $V_{CE} = -5V, I_C = -20mA, f = 100MHz$	$f_T$	200	-	-	MHz
Collector output capacitance $V_{CB} = -10V, I_E = 0mA, f = 1MHz$	$C_{ob}$	-	12	30	pF

CLASSIFICATION  $h_{FE}$ 

Item	Q	R
Range	120-270	180-390
Marking	AHQ	AHR

## Electrical characteristic curves

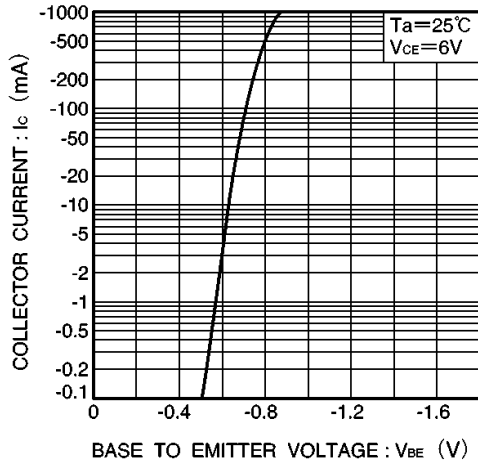


Fig.1 Grounded emitter propagation characteristics

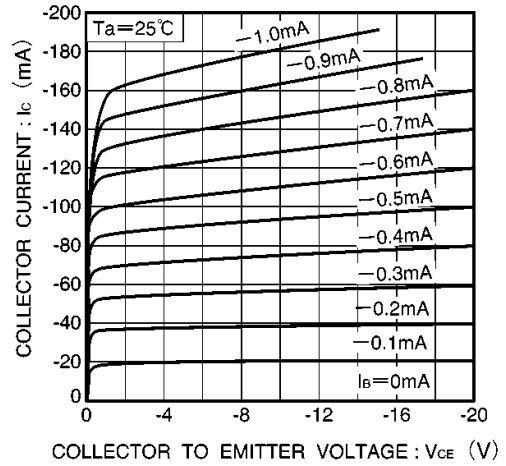


Fig.2 Grounded emitter output characteristics ( I )

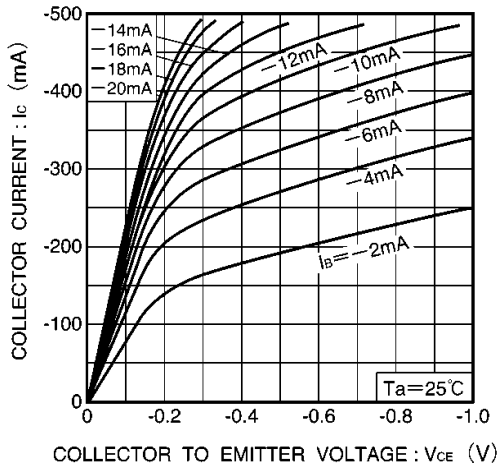


Fig.3 Grounded emitter output characteristics ( II )

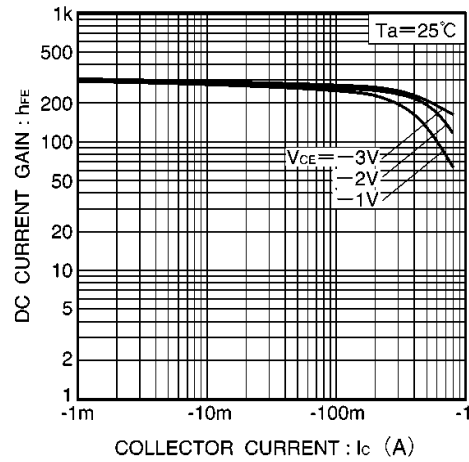


Fig.4 DC current gain vs. collector current

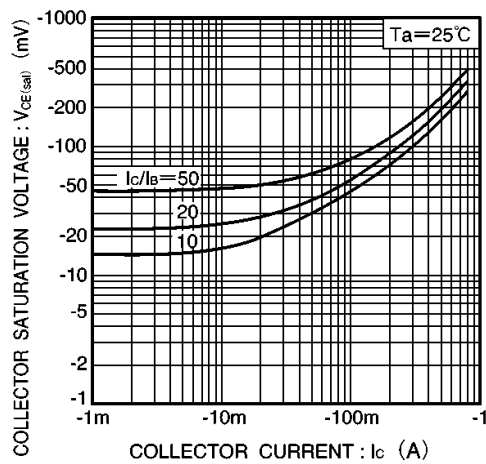


Fig.5 Collector-emitter saturation voltage vs. collector current

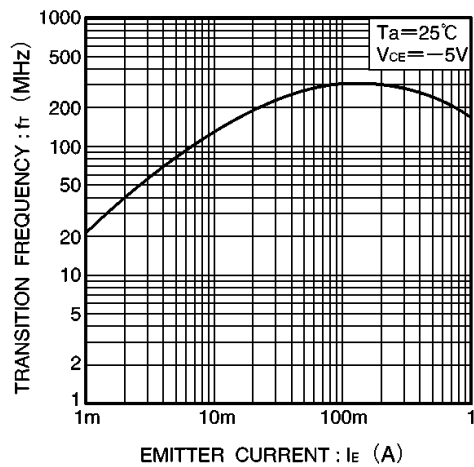


Fig.6 Gain bandwidth product vs. emitter current