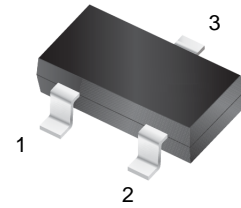


## PNP Transistor in SOT-23

### Features

- High DC Current Gain:  $h_{FE}=200$ typ. ( $V_{CE}=-6V, I_C=-1mA$ )
- High Voltage:  $V_{CEO}=-50V$
- Complementary to 2SC1623



1. BASE
2. EMITTER
3. COLLECTOR

### Mechanical Data

- **Case:** SOT-23 (plastic package).  
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current	-100	mA
$P_C$	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	°C/W
$T_J$	Junction Temperature	-55~+150	°C
$T_{stg}$	Storage Temperature	-55~+150	°C

### Electrical Characteristics

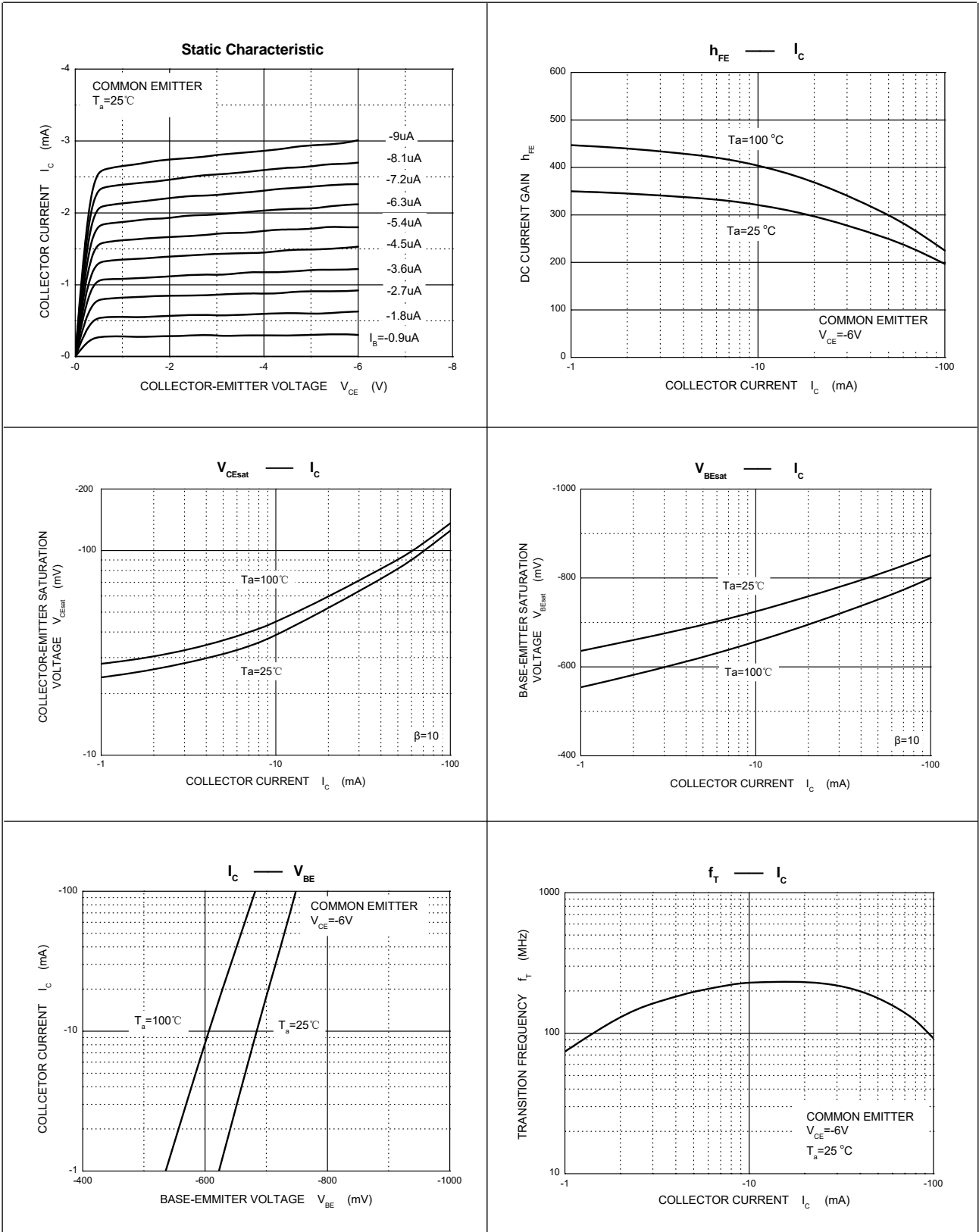
( $T_A = 25\text{ °C}$  unless otherwise specified)

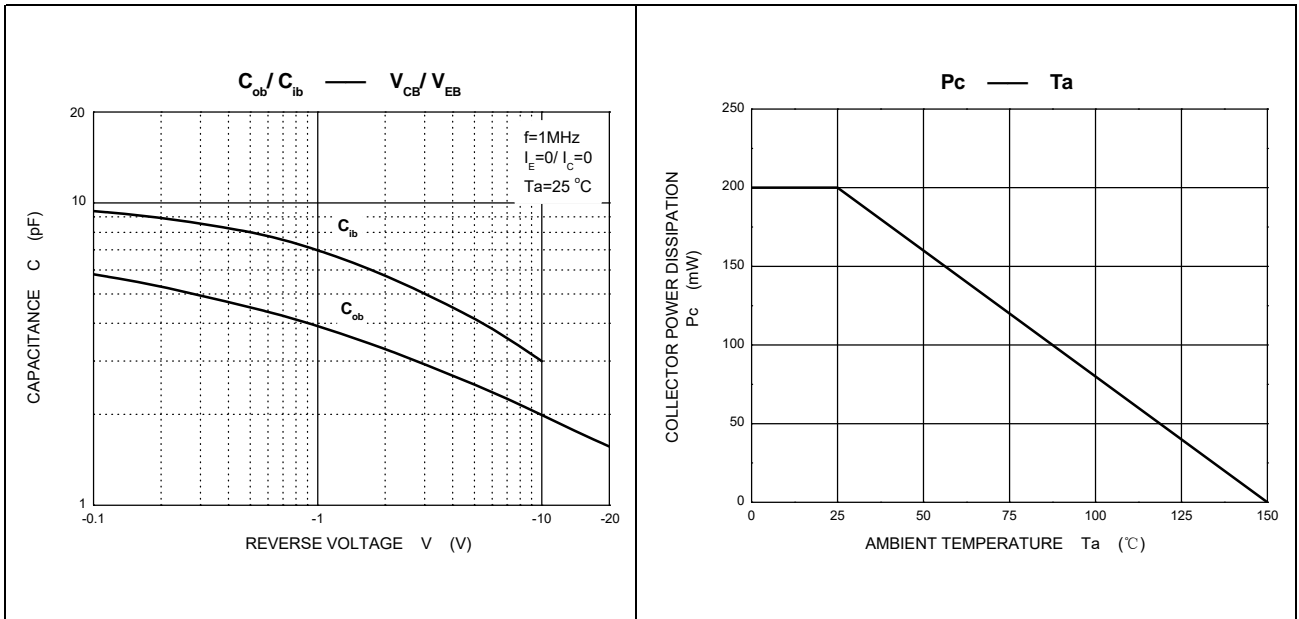
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu A, I_E=0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1mA, I_B=0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu A, I_C=0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-60V, I_E=0$			-0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-5V, I_C=0$			-0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=-6V, I_C=-1mA$	90		600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-100mA, I_B=-10mA$			-0.3	V
Base-emitter voltage	$V_{BE}$	$I_C=-1mA, V_{CE}=-6V$	-0.58		-0.68	V
Transition frequency	$f_T$	$V_{CE}=-6V, I_C=-10mA$		180		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10V, I_E=0, f=1MHz$		4.5		pF

### Classification of $h_{FE}$

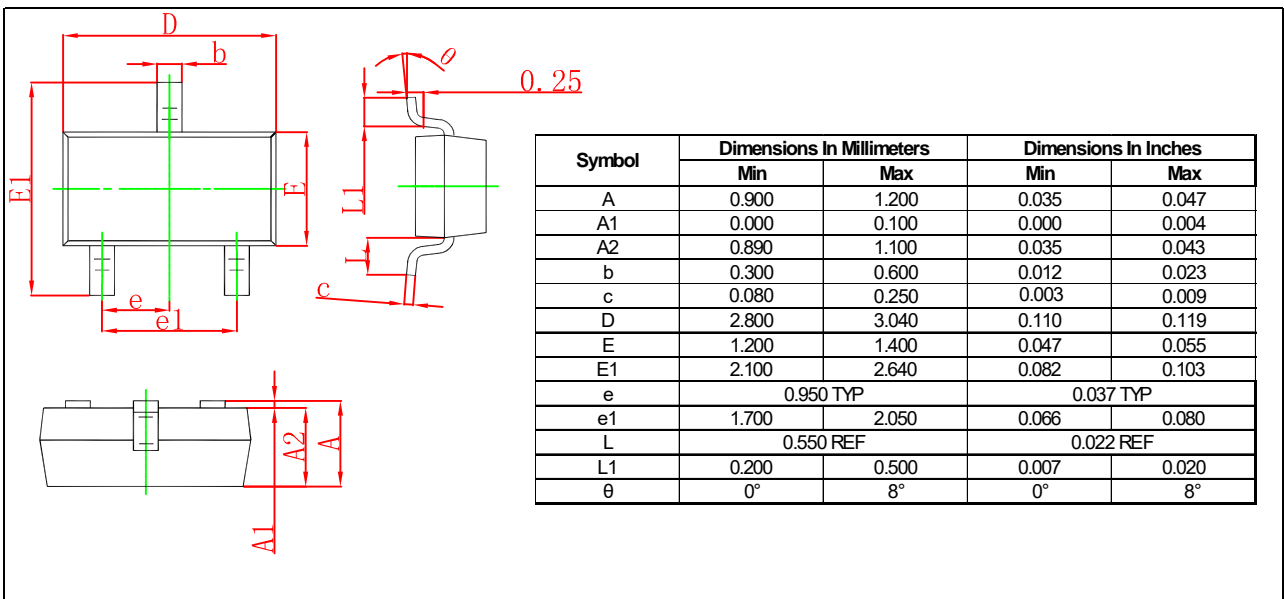
Rank	M4	M5	M6	M7
Range	90-180	135-270	200-400	300-600
Marking	M4	M5	M6	M7

**Typical Characteristics** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise specified)





**Package Dimensions**



**Ordering information**

Order code	Package	Packaging option	Base quantity	Packaging specification
2SA812Q	SOT-23	Tape and reel	3000pcs / reel	EIA STD RS-481

**Revision history**

Date	Revision	Changes
24-Jul-2025	3.0	Update

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