

## Descriptions

Silicon PNP transistor in a SOT-23 Plastic Package

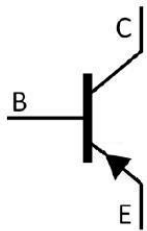
## Features

- High voltage and high current
- Excellent hFE linearity
- Low noise
- Complementary pair with CT2SC1815M
- Halogen-free Product

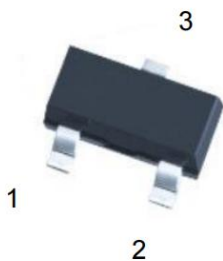
## Applications

Audio frequency general purpose amplifier applications, driver stage amplifier applications

## Equivalent Circuit



## Pinning



PIN1: Base      PIN 2: Emitter      PIN 3: Collector

## hFE Classifications & Marking

hFE Classifications Symbol	O	Y	GR
hFE Range	70~140	120~240	200~400
Marking	HBAO	HBAY	HBAG

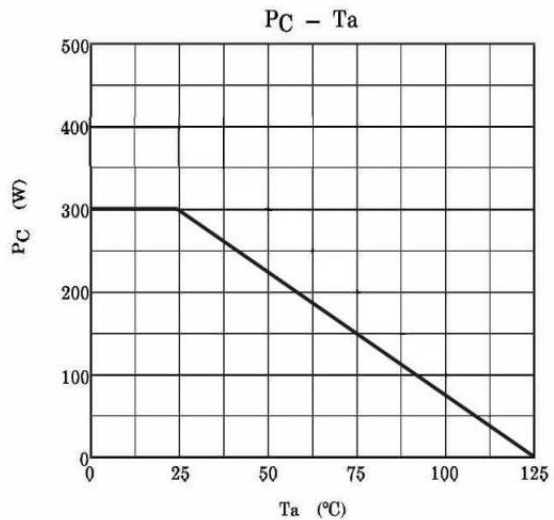
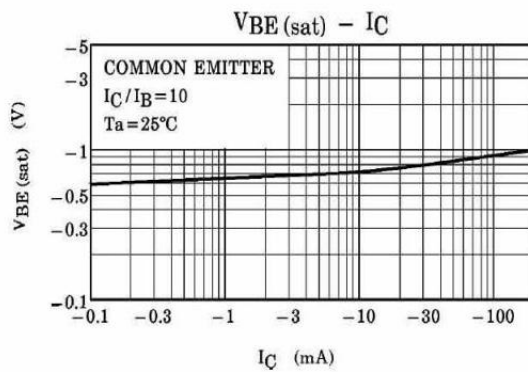
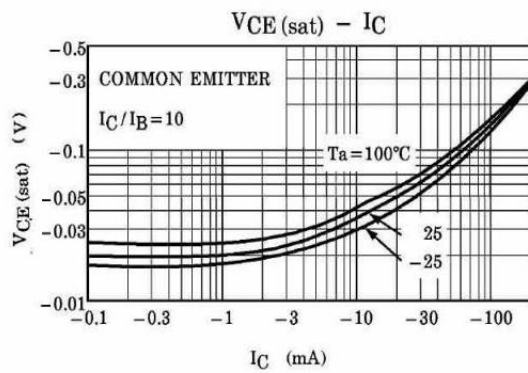
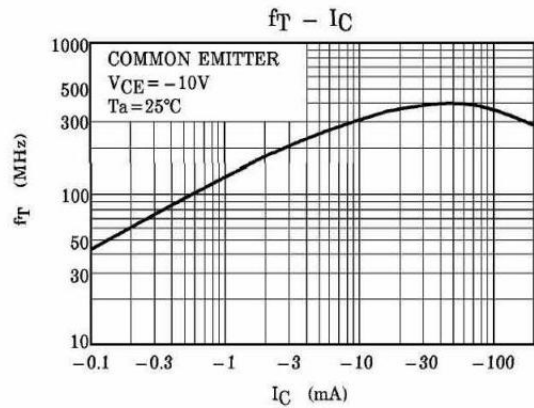
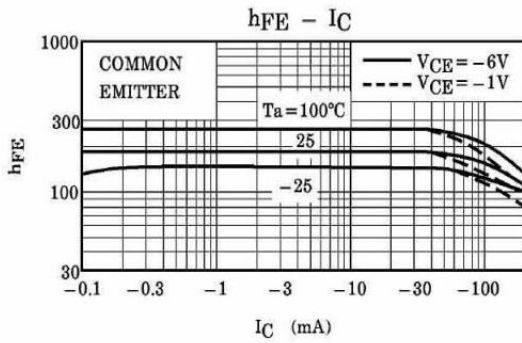
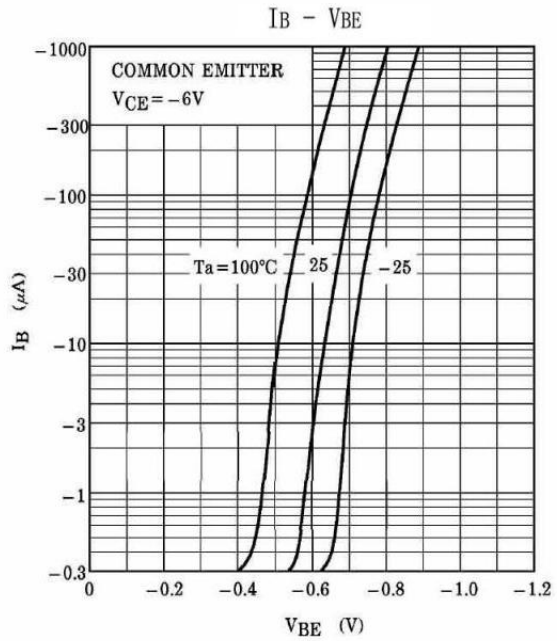
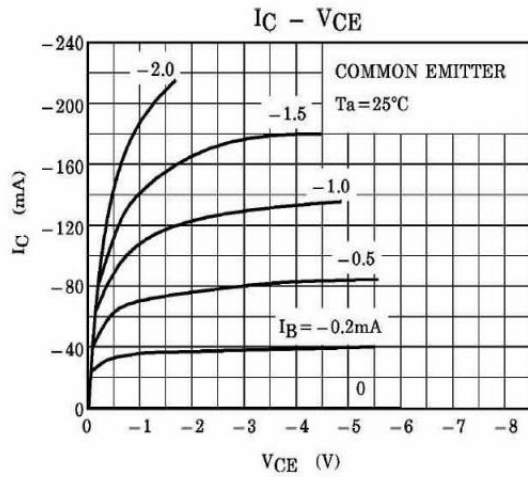
**Absolute Maximum Ratings(Ta=25°C)**

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-50	V
Collector to Emitter Voltage	$V_{CEO}$	-50	V
Emitter to Base Voltage	$V_{EBO}$	-5.0	V
Collector Current	$I_C$	-150	mA
Base Current	$I_B$	-50	mA
Collector Power Dissipation	$P_C$	300	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55~150	°C

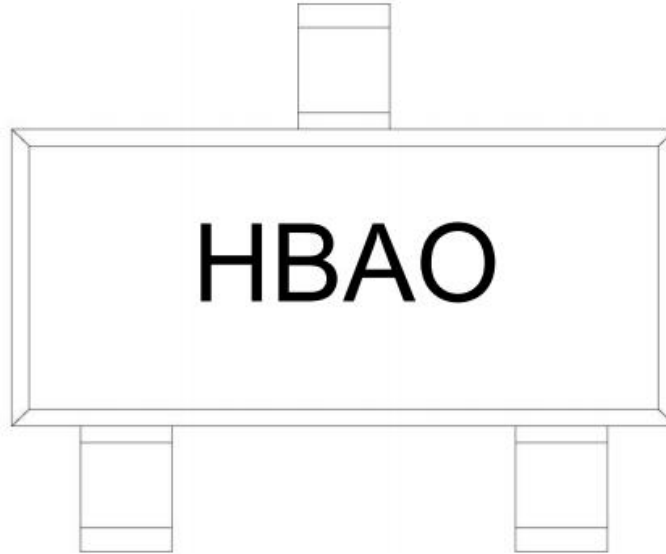
**Electrical Characteristics(Ta=25°C)**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-50V$ $I_E=0$			-0.1	$\mu A$
Emitter Base Cut-Off Current	$I_{EBO}$	$V_{EB}=-5.0V$ $I_C=0$			-0.1	$\mu A$
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-6.0V$ $I_C=-2.0mA$	70		400	
	$h_{FE(2)}$	$V_{CE}=-6.0V$ $I_C=-150mA$	25			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-100mA$ $I_B=-10mA$		-0.1	-0.3	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-100mA$ $I_B=-10mA$			-1.1	V
Transition Frequency	$f_T$	$I_C=-1.0mA$ $V_{CE}=-10V$	80			MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$		4.0	7.0	pF
Base Intrinsic Resistance	$r_{bb'}$	$V_{CB}=-10V$ $I_E=1.0mA$ $f=30MHz$		30		$\Omega$
Noise Figure	NF	$V_{CE}=-6.0V$ $I_C=-0.1mA$ $R_G=10k\Omega$ $f=1.0KHz$		1.0	10	dB

Electrical Characteristic Curve



**Marking Instructions**



Note:

- H: Company Code
- BA: Product Type Code
- O:  $h_{FE}$  Classifications Symbol Code

$h_{FE}$ Classifications Symbol	O	Y	GR
$h_{FE}$ Range	70~140	120~240	200~400
Marking	HBAO	HBAY	HBAG

**Packaging SPEC**

REEL INFORMATION

Package Type	Units					Dimension (unit: mm <sup>3</sup> )		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7" x8	180x120x180	390x385x205

**Package Outline Dimensions**

SOT-23

单位; mm

