

**Descriptions**

This is Silicon PNP transistor in a SOT-23 Plastic Package.

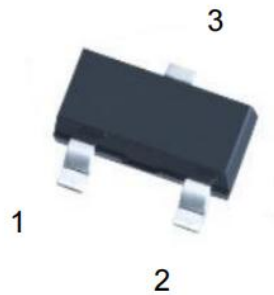
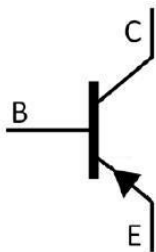
**Features**

- High PC and IC
- Excellent hFE linearity
- Complementary pair with 9013M
- Halogen-free Product

**Applications**

Amplifier of portable radios in class B push-pull operation

**Equivalent Circuit & Pinning**



PIN1: Base

PIN 2: Emitter

PIN 3: Collector

**hFE Classifications & Marking**

h <sub>FE</sub> Classifications Symbol	D	E	F	G	H	I
h <sub>FE</sub> Range	64~91	78~112	96~135	112~166	144~202	188~276
Marking	H2TD	H2TE	H2TF	H2TG	H2TH	H2TI

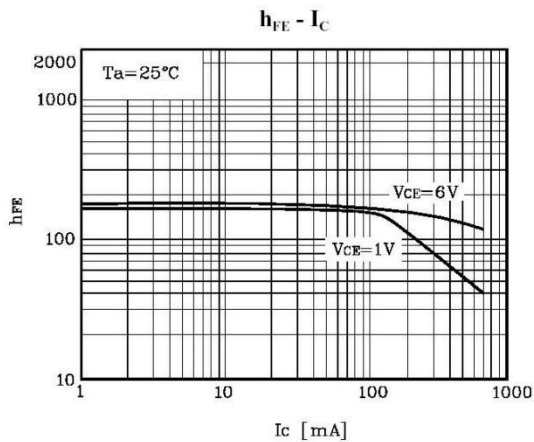
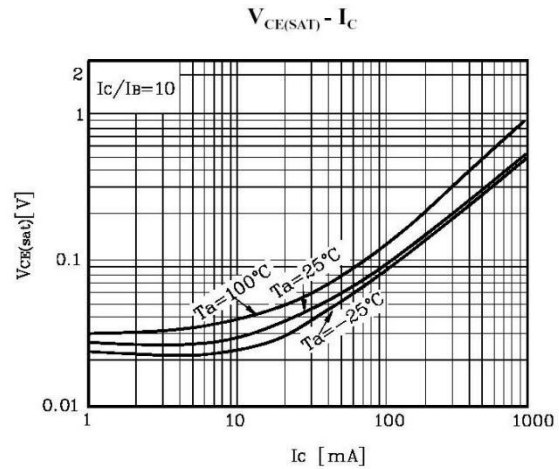
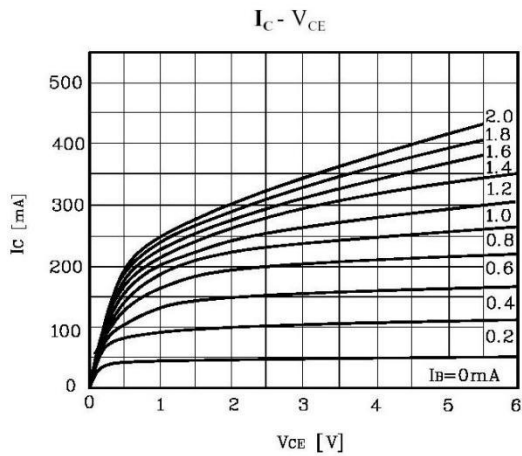
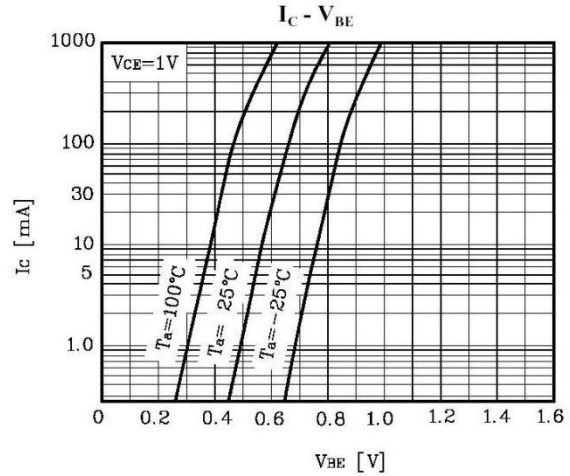
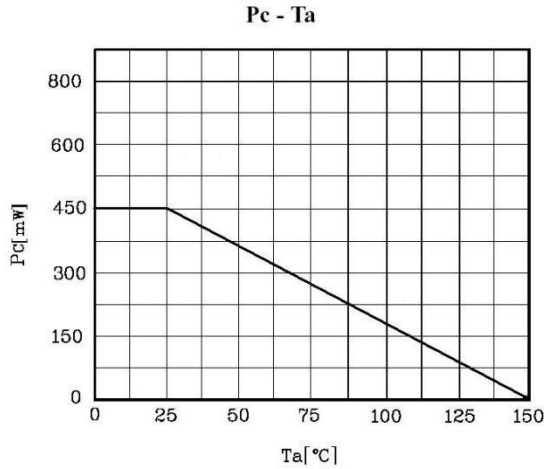
## Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V <sub>CB0</sub>	-40	V
Collector to Emitter Voltage	V <sub>CEO</sub>	-20	V
Emitter to Base Voltage	V <sub>EBO</sub>	-5.0	V
Collector Current	I <sub>C</sub>	-500	mA
Base Current	I <sub>B</sub>	-100	mA
Collector Power Dissipation	P <sub>C</sub>	450	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55~150	°C

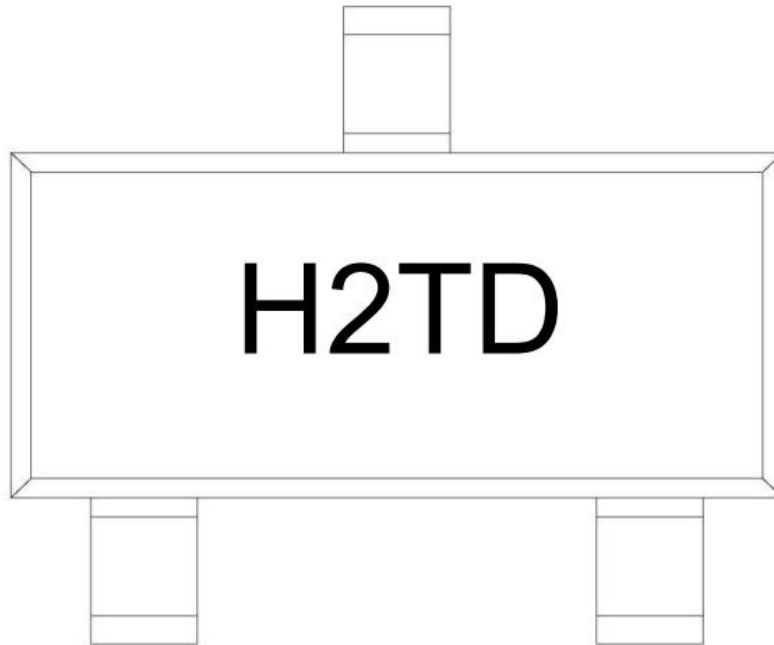
## Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V <sub>CB0</sub>	I <sub>C</sub> =-0.1mA I <sub>E</sub> =0	-40			V
Collector to Emitter Breakdown Voltage	V <sub>CEO</sub>	I <sub>C</sub> =-1.0mA I <sub>B</sub> =0	-20			V
Emitter to Base Breakdown Voltage	V <sub>EBO</sub>	I <sub>E</sub> =-0.1mA I <sub>C</sub> =0	-5.0			V
Collector Cut-Off Current	I <sub>CB0</sub>	V <sub>CB</sub> =-25V I <sub>E</sub> =0			-0.1	μA
Emitter Cut-off Current	I <sub>EBO</sub>	V <sub>EB</sub> =-3.0V I <sub>C</sub> =0			-0.1	μA
DC Current Gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =-1.0V I <sub>C</sub> =-50mA	64		276	
	h <sub>FE(2)</sub>	V <sub>CE</sub> =-1.0V I <sub>C</sub> =-500mA	40			
Collector-Emitter Saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-500mA I <sub>B</sub> =-50mA		-0.18	-0.6	V
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-500mA I <sub>B</sub> =-50mA		-0.95	-1.2	V
Base-Emitter Voltage	V <sub>BE</sub>	V <sub>CE</sub> =-1.0V I <sub>C</sub> =-10mA		-0.67	-0.7	V

**Electrical Characteristic Curve**



**Marking Instructions**



Note:

- H: Company Code
- 2T: Product Type Code
- D:  $h_{FE}$  Classifications Symbol Code

$h_{FE}$ Classifications Symbol	D	E	F	G	H	I
$h_{FE}$ Range	64~91	78~112	96~135	112~166	144~202	188~276
Marking	H2TD	H2TE	H2TF	H2TG	H2TH	H2TI

**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

