

**Description**

Silicon PNP transistor in a SOT-23 Plastic Package

**Applications**

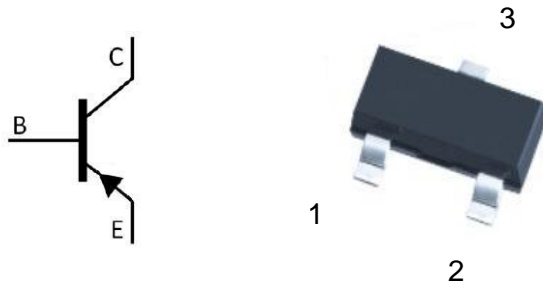
High voltage control circuit

**Features**

- High voltage
- Low saturation voltage
- Low collector output capacitance
- Complementary pair with MMBTA42
- Halogen-free product

Symbol	Parameter	Max	Unit
$V_{CE0}$	collector-emitter voltage	-300	V
$I_C$	collector current (DC)	-500	mA

**Equivalent Circuit & Pinning**



PIN1: Base

PIN 2: Emitter

PIN 3: Collector

**hFE Classifications & Marking**

h <sub>FE</sub> Range	>40
Marking	H2D

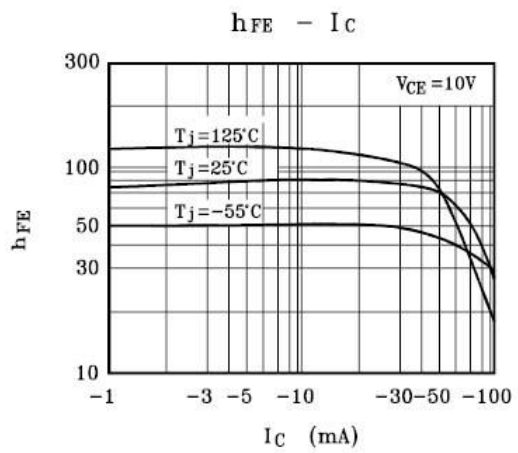
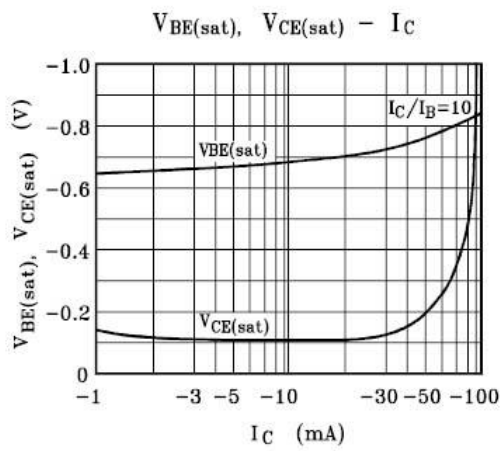
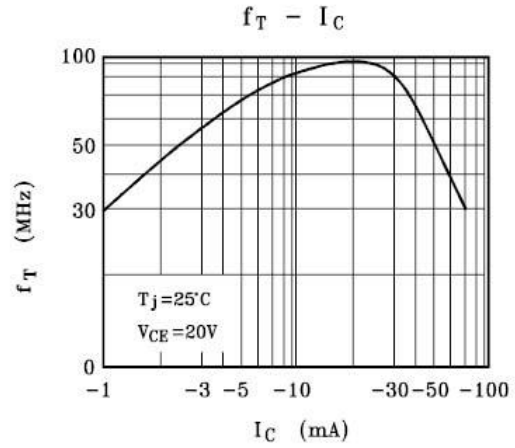
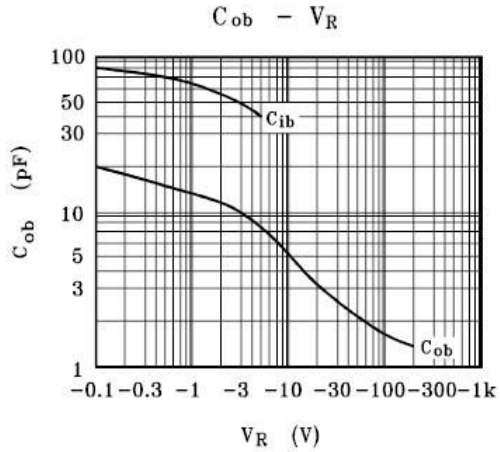
**Absolute Maximum Ratings(Ta=25°C)**

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-300	V
Collector to Emitter Voltage	$V_{CEO}$	-300	V
Emitter to Base Voltage	$V_{EBO}$	-5.0	V
Collector Current - Continuous	$I_C$	-500	mA
Collector Power Dissipation	$P_C$	350	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55~150	°C

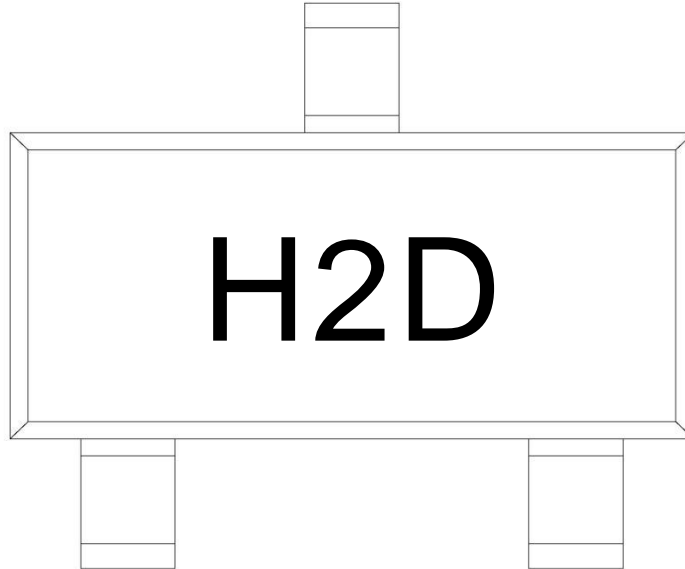
**Electrical Characteristics(Ta=25°C)**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	$V_{CBO}$	$I_C=-100\mu A$ $I_E=0$	-300			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=-1.0mA$ $I_B=0$	-300			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=-100\mu A$ $I_C=0$	-5.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-200V$ $I_E=0$			-0.25	$\mu A$
Emitter Base Cut-Off Current	$I_{EBO}$	$V_{BE}=-3.0V$ $I_C=0$			-0.1	$\mu A$
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-10V$ $I_C=-10mA$	40			
	$h_{FE(2)}$	$V_{CE}=-10V$ $I_C=-30mA$	25			
	$h_{FE(3)}$	$V_{CE}=-10V$ $I_C=-1.0mA$	25			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-20mA$ $I_B=-2.0mA$			-0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-20mA$ $I_B=-2.0mA$			-0.9	V
Transition Frequency	$f_T$	$I_C=-10mA$ $f=100MHz$ $V_{CE}=-20V$	50			MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=-20V$ $f=1.0MHz$ $I_E=0$			6.0	pF

Electrical Characteristic Curve



Marking Instructions



Note:

H: Company Code.

2D: Product Type Code.

Packaging SPEC.

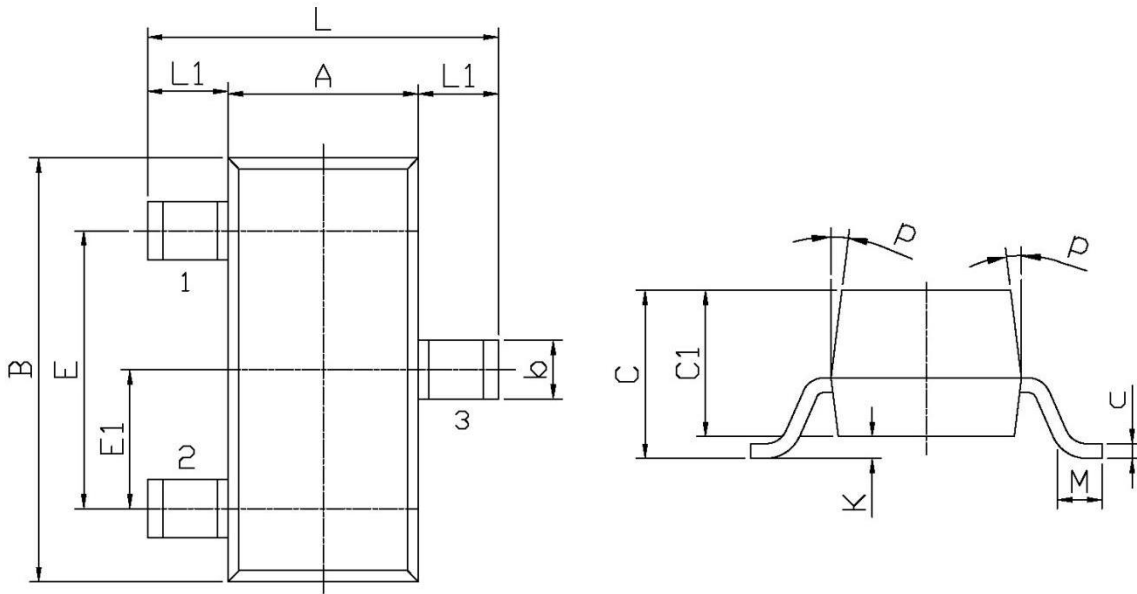
REEL INFORMATION

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



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	P	7°	
b	0.35	0.55			