

Descriptions

Silicon NPN transistor in a SOT-23 Plastic Package

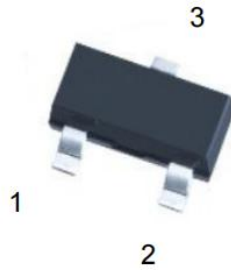
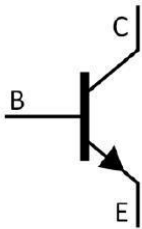
Features

- High P_c and f_T
- low frequency shift
- Halogen-free Product

Applications

AM/FM IF amplifier, local oscillator

Equivalent Circuit & Pinning



PIN1: Base

PIN 2: Emitter

PIN 3: Collector

hFE Classifications & Marking

h _{FE} Classifications Symbol	D	E	F	G	H	I
h _{FE} Range	28~45	39~60	54~80	72~108	97~146	132~198
Marking	HJ8D	HJ8E	HJ8F	HJ8G	HJ8H	HJ8I

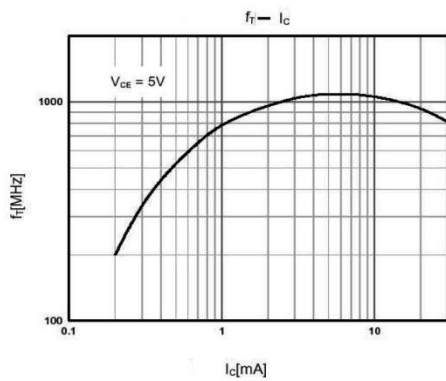
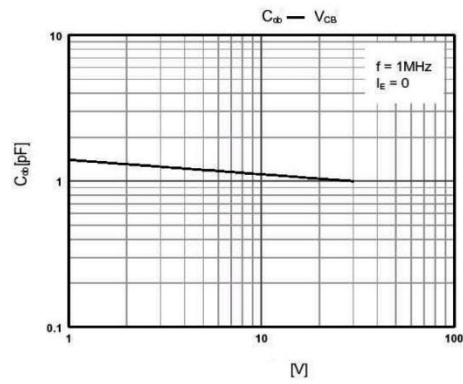
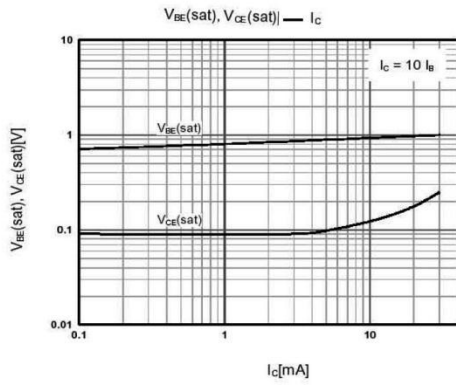
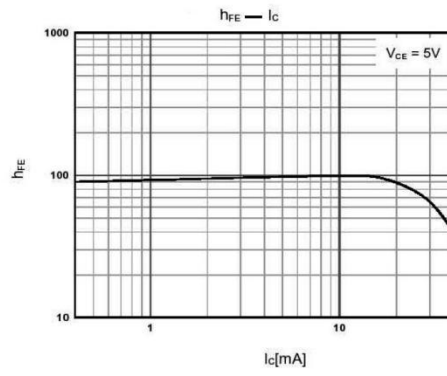
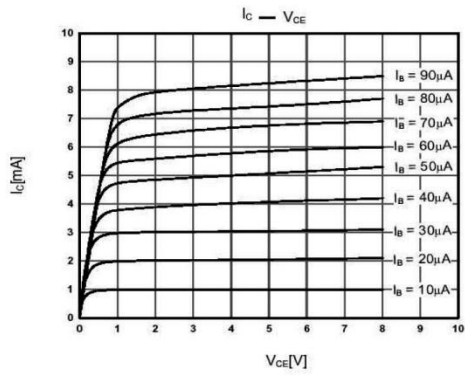
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	15	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	50	mA
Base Current	I_B	10	mA
Collector Power Dissipation	P_C	310	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

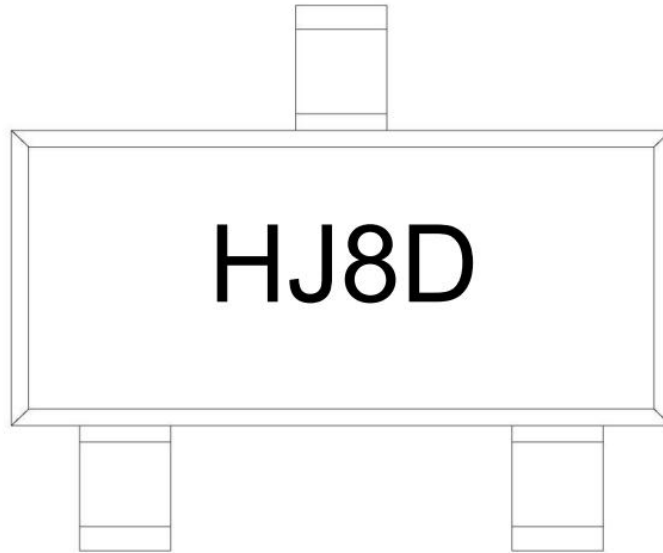
Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=0.1mA$ $I_E=0$	30			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$ $I_B=0$	15			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=0.1mA$ $I_C=0$	5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=12V$ $I_E=0$			0.05	μA
DC Current Gain	h_{FE}	$V_{CE}=5.0V$ $I_C=1.0mA$	28		198	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10mA$ $I_B=1.0mA$			0.5	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=5.0mA$	700	1100		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		1.3	1.7	pF

Electrical Characteristic Curve



Marking Instructions



Note:

- H: Company Code
- J8: Product Type Code
- D: h_{FE} Classifications Symbol Code

h_{FE} Classifications Symbol	D	E	F	G	H	I
h_{FE} Range	28~45	39~60	54~80	72~108	97~146	132~198
Marking	HJ8D	HJ8E	HJ8F	HJ8G	HJ8H	HJ8I

Packaging SPEC

REEL INFORMATION

Package Type	Units					Dimension (unit: mm ³)		
	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	180×120×180	390×385×205

Package Outline Dimensions

SOT-23

单位: mm

