

Description

Silicon NPN transistor in a SOT-89 Plastic Package

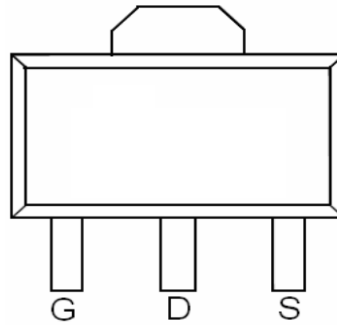
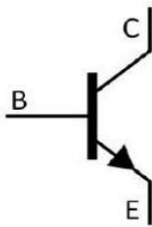
Applications

Audio frequency output amplifier.

Features

- Low $V_{CE(sat)}$
- High performance
- Halogen-free product

Symbol	Parameter	Max	Unit
V_{CE0}	collector-emitter voltage	20	V
I_c	collector current (DC)	5.0	A

Equivalent Circuit & Pinning


SOT-89 top view

PIN1: Base

PIN 2: Collector

PIN 3: Emitter

 h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	P	Q	R	S
h_{FE} Range	180~270	230~380	340~600	560~1000
Marking	H65P	H65Q	H65R	H65S

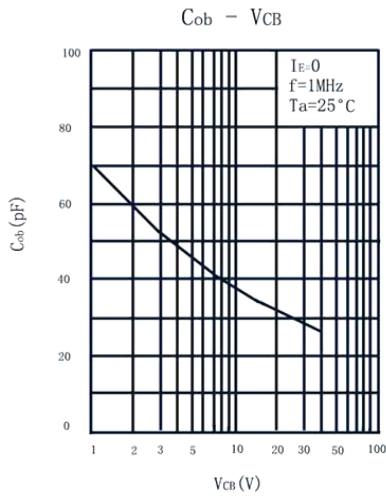
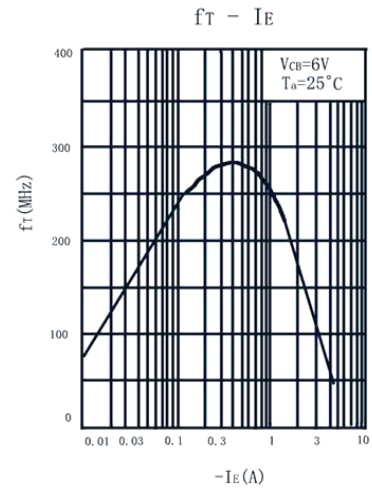
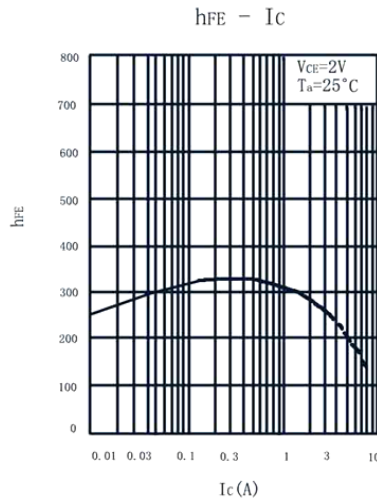
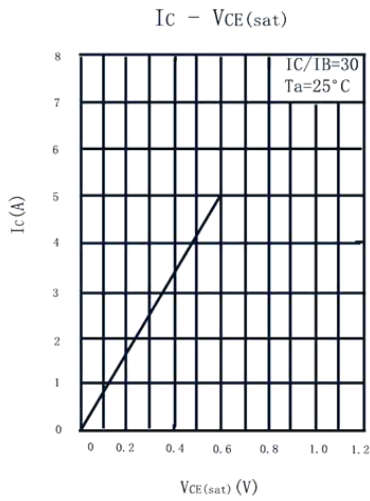
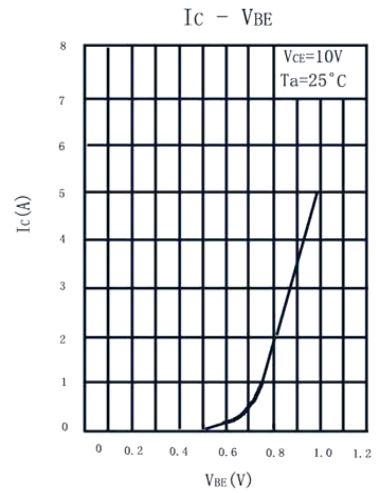
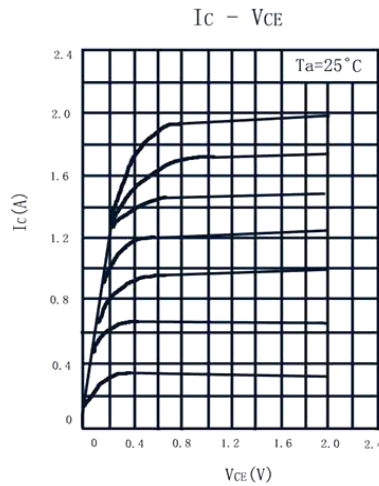
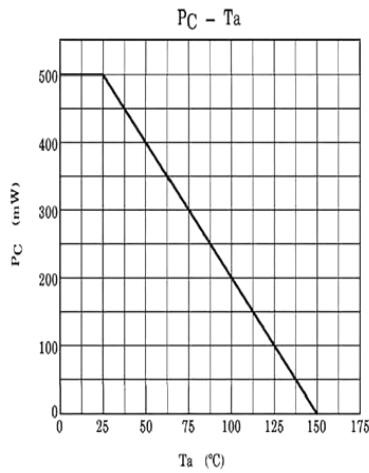
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	20	V
Emitter to Base Voltage	V_{EBO}	7.0	V
Collector Current-Continuous	I_C	5.0	A
Collector Current -Continuous(Pluse)	I_{CP}	8.0	A
Collector Power Dissipation	P_C	500	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

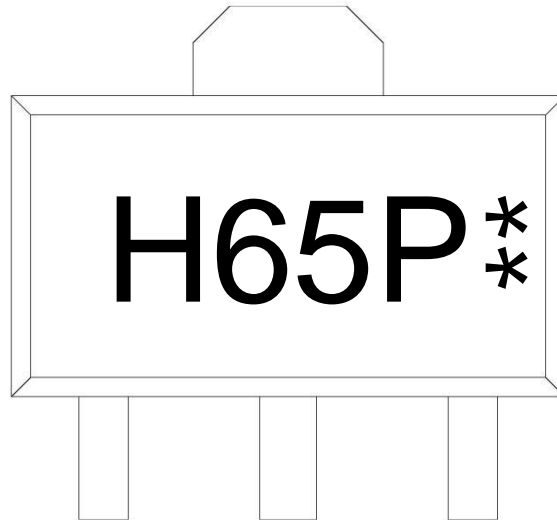
Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$ $I_B=0$	20			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=10\mu A$ $I_C=0$	7.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=10V$ $I_E=0$			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=7.0V$ $I_C=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0V$ $I_C=0.5A$	180		1000	
	$h_{FE(2)}$	$V_{CE}=2.0V$ $I_C=2.0A$	150			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3.0A$ $I_B=0.1A$			1.0	V
Transition Frequency	f_T	$V_{CE}=6.0V$ $I_C=50mA$		150		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=20V$ $f=1.0MHz$ $I_E=0$			50	pF

Electrical Characteristic Curve



Marking Instructions



Note:

- H: Company Code
- 65: Product Type
- P: h_{FE} Classifications Symbol
- ** : Lot No. Code, code change with Lot No

h_{FE} Classifications Symbol	P	Q	R	S
h_{FE} Range	180~270	230~380	340~600	560~1000
Marking	H65P	H65Q	H65R	H65S

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-89	1,000	7	7,000	8	56000	7" x12	180x120x180	385x257x392

Package Outline Dimensions

SOT-89

单位: mm

