

Description

Silicon NPN transistor in a SOT-89 Plastic Package

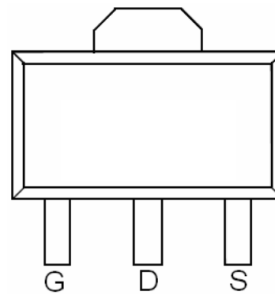
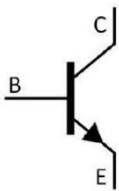
Applications

Power amplifier applications.

Features

- Complementary pair with 8550T
- Halogen-free product

Symbol	Parameter	Max	Unit
V_{CEO}	collector-emitter voltage	25	V
I_c	collector current (DC)	1.5	A

Equivalent Circuit & Pinning


SOT-89 top view

PIN1: Base

PIN 2: Collector

PIN 3: Emitter

hFE Classifications & Marking

h _{FE} Classifications Symbol	B	C	D
h _{FE} Range	85~160	120~200	160~300
Marking	HY1B	HY1C	HY1D

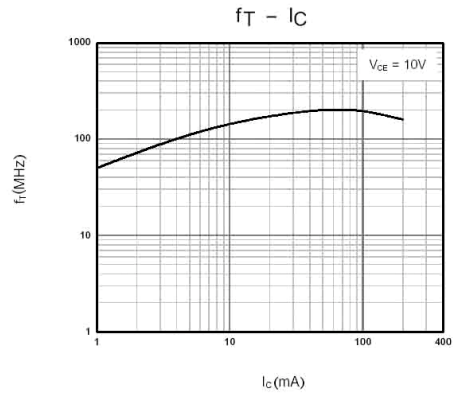
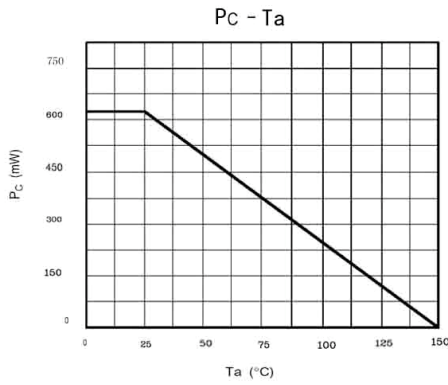
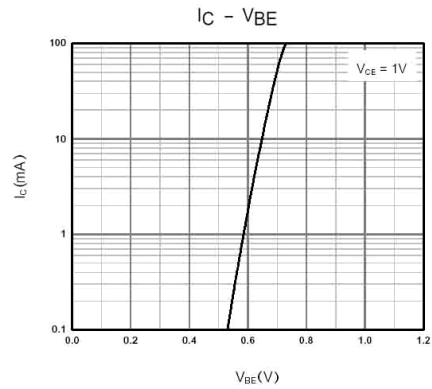
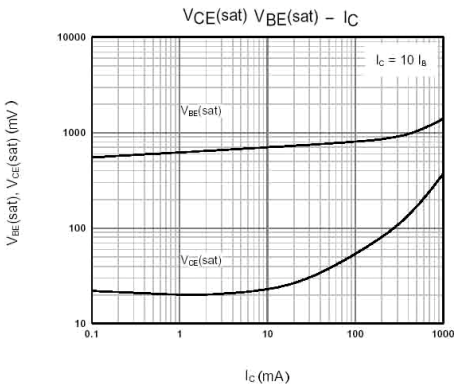
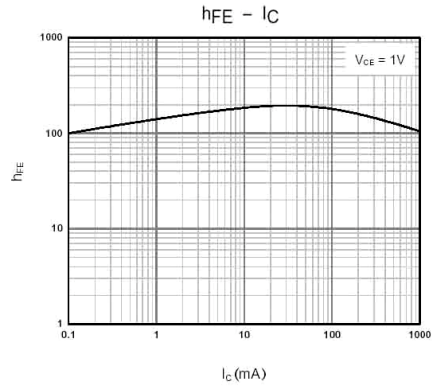
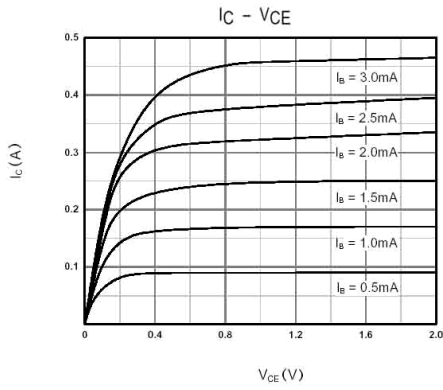
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	25	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	1.5	A
Collector Base - Continuous	I_B	0.5	A
Collector Power Dissipation	P_C	500	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

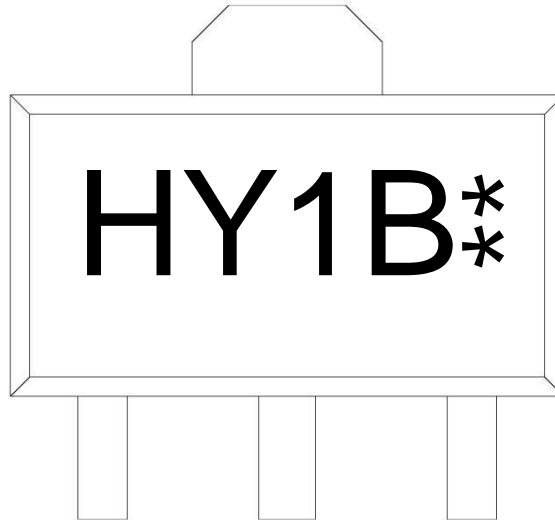
Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=0.1mA$ $I_E=0$	40			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=2.0mA$ $I_B=0$	25			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=0.1mA$ $I_C=0$	6.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=35V$ $I_E=0$			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=6.0V$ $I_C=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=1.0V$ $I_C=100mA$	85		300	
	$h_{FE(2)}$	$V_{CE}=1.0V$ $I_C=800mA$	40			
	$h_{FE(3)}$	$V_{CE}=1.0V$ $I_C=5.0mA$	45			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=800mA$ $I_B=80mA$		0.28	0.5	V
Emitter to Base Saturation Voltage	$V_{BE(sat)}$	$I_C=800mA$ $I_B=80mA$		0.98	1.2	V
Emitter to Base Voltage	V_{BE}	$V_{CE}=1.0V$ $I_C=10mA$		0.66	1.0	V
Transition Frequency	f_T	$V_{CE}=10V$ $I_C=50mA$	100	190		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $f=1.0MHz$ $I_E=0$		9.0		pF

Electrical Characteristic Curve



Marking Instructions



- ote:
- H: Company Code
- Y1: Product Type
- B: h_{FE} Classifications Symbol
- **:
- Lot No. Code, code change with Lot No

h_{FE} Classifications Symbol	B	C	D
h_{FE} Range	85~160	120~200	160~300
Marking	HY1B	HY1C	HY1D

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	6	42,000	7" x12	180x120x180	390x385x205

Package Outline Dimensions

SOT-89

单位: mm

