

Description

Silicon NPN transistor in a SOT-89 Plastic Package

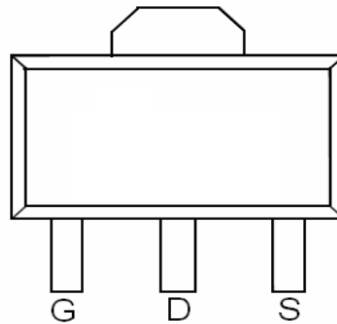
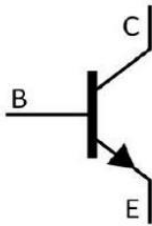
Applications

General purpose amplifier.

Features

- Low $V_{CE(sat)}$
- Excellent current gain characteristic
- Complementary to 2SB1424
- Halogen-free product

Symbol	Parameter	Max	Unit
V_{CE0}	collector-emitter voltage	20	V
I_c	collector current (DC)	3.0	A

Equivalent Circuit & Pinning


SOT-89 top view

PIN1: Base

PIN 2: Collector

PIN 3: Emitter

 h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	R	S
h_{FE} Range	180~390	270~560
Marking	HCFR	HCFS

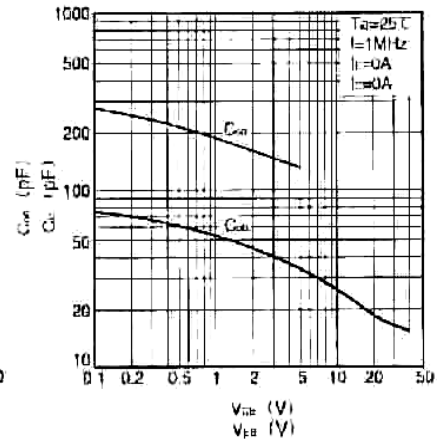
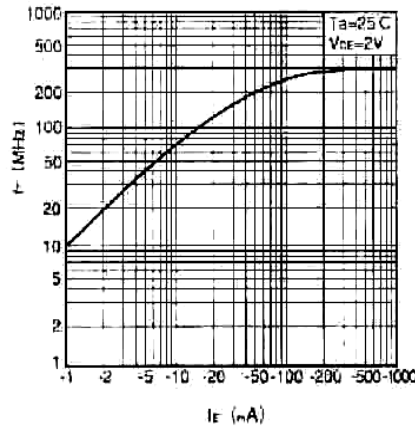
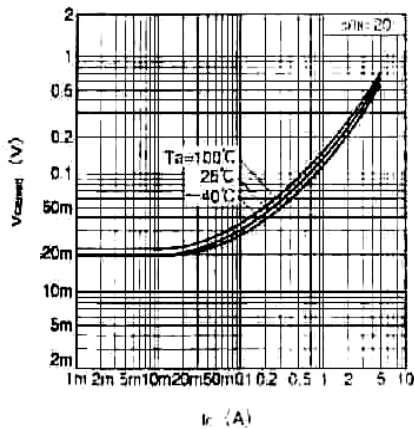
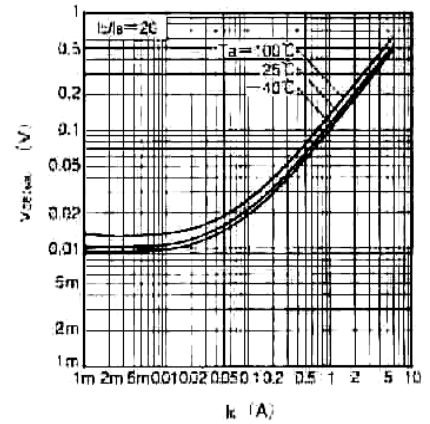
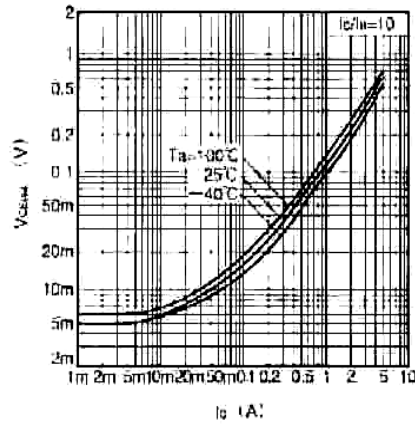
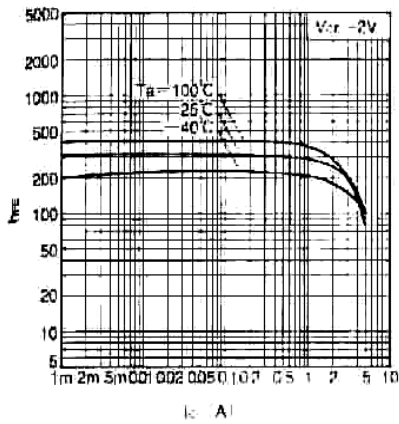
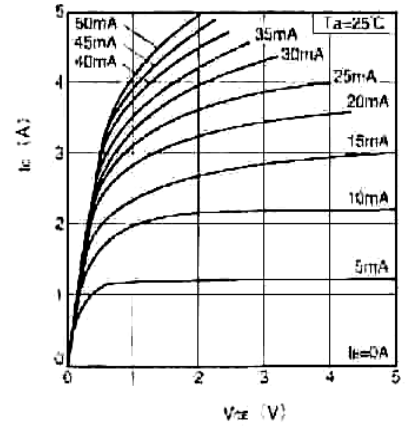
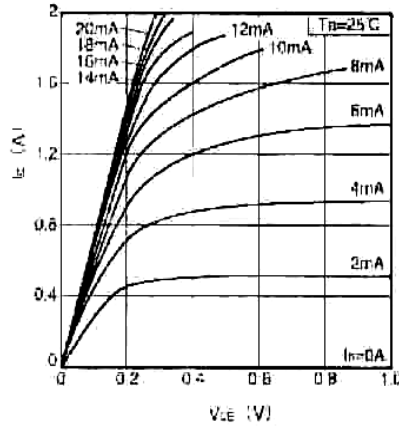
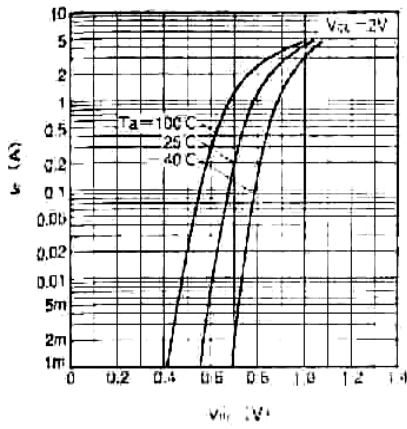
Absolute Maximum Ratings(Ta=25°C)

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}	6.0	V
Collector Current-Continuous	$I_{C(DC)}$	3.0	A
Collector Base-Continuous(Pulse)*	$I_{C(Pulse)^*}$	5.0	A
Collector Power Dissipation	P_C	500	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

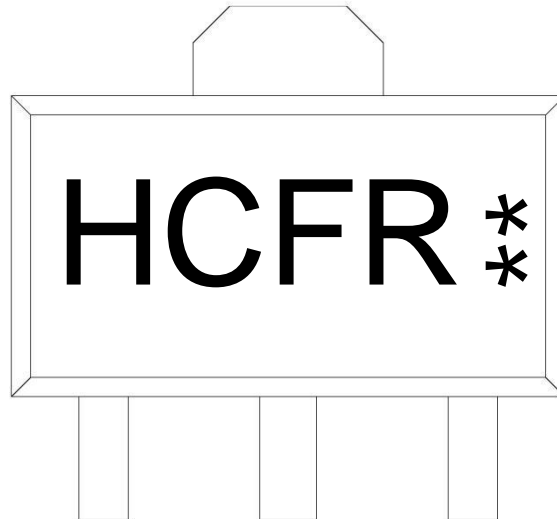
Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=50\mu A$	40			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$	20			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=50\mu A$	6.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V$			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=2.0V$ $I_C=100mA$	180		560	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2.0A$ $I_B=100mA$		0.2	0.5	V
Transition Frequency	f_T	$V_{CE}=2.0V$ $I_C=0.5A$ $f=100MHz$		290		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		25		pF

Electrical Characteristic Curve



Marking Instructions



Note:

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

h_{FE} Classifications Symbol	R	S
h_{FE} Range	180~390	270~560
Marking	HCFR	HCFS

Packaging SPEC.

REEL INFORMATION

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOT-89	1,000	7	7,000	6	42000	7" ×12	180×120×180	390×385×205

Package Outline Dimensions

SOT-89

单位: mm

