

Description

Silicon NPN transistor in a SOT-89 Plastic Package

Applications

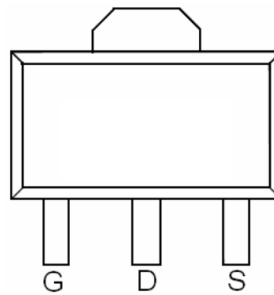
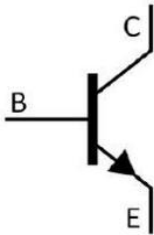
Color TV class B sound output applications.

Features

- High V_{CEO}
- Complementary pair with 2SA1013T
- Halogen-free product

Symbol	Parameter	Max	Unit
V_{CEO}	collector-emitter voltage	160	V
I_c	collector current (DC)	1.0	A

Equivalent Circuit & Pinning



SOT-89 top view

PIN1: Base

PIN 2: Collector

PIN 3: Emitter

hFE Classifications & Marking

h _{FE} Classifications Symbol	R	O	Y
h _{FE} Range	60~120	100~200	160~320
Marking	H83R	H83O	H83Y

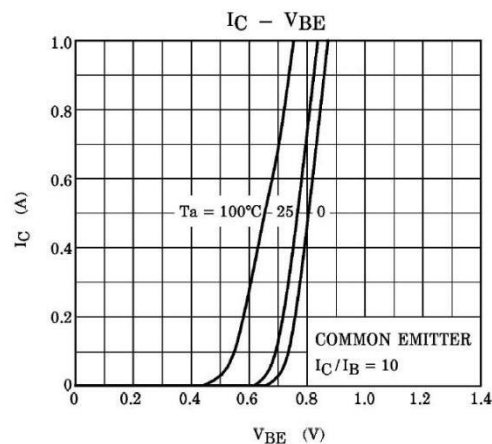
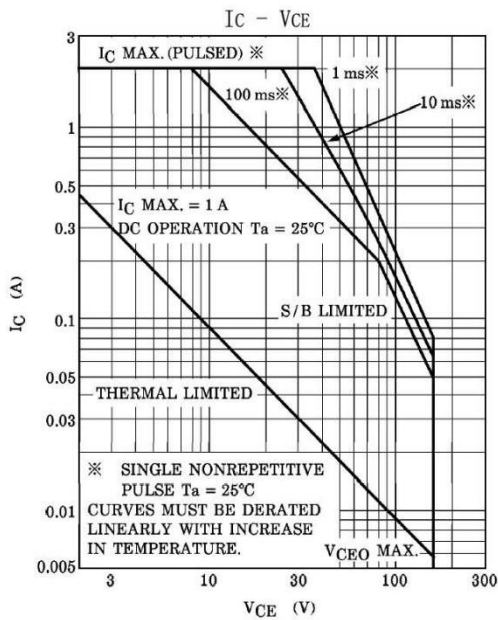
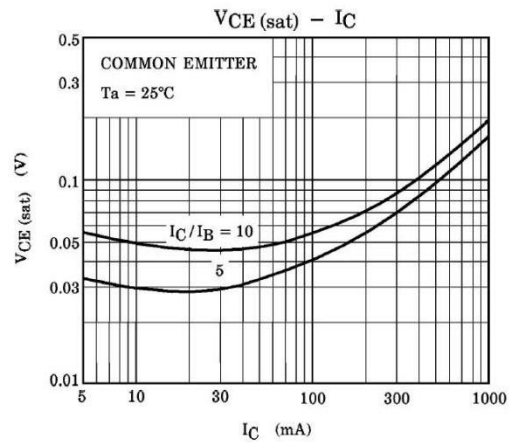
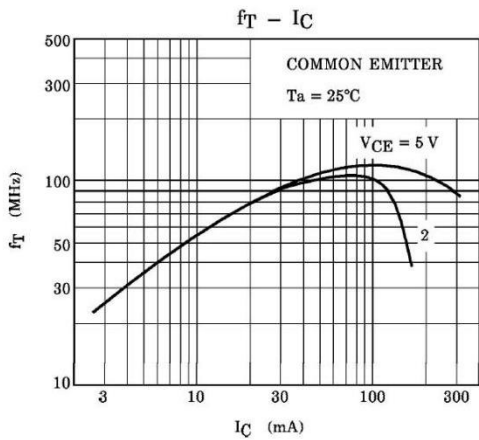
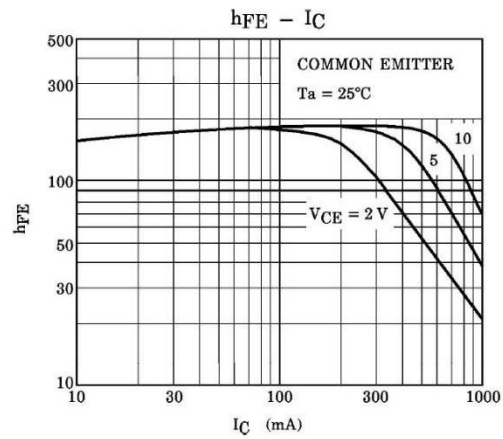
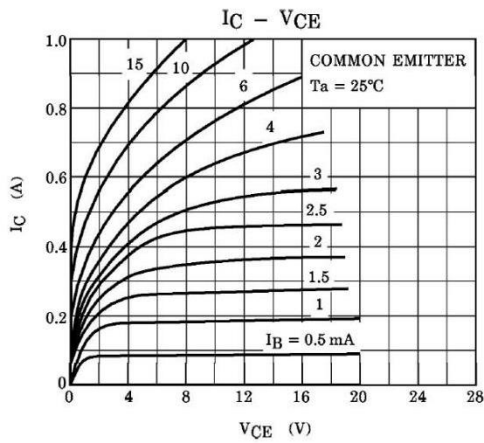
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	160	V
Collector to Emitter Voltage	V_{CEO}	160	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current-Continuous	I_C	1.0	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

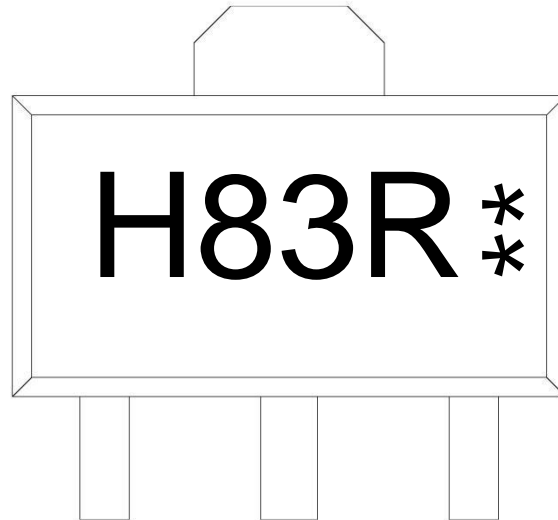
Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=10mA$ $I_B=0$	160			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=150V$ $I_E=0$			1.0	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=6.0V$ $I_C=0$			1.0	μA
DC Current Gain	h_{FE}	$V_{CE}=5.0V$ $I_C=200mA$	60		320	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA$ $I_B=50mA$			1.5	V
Emitter to Base Saturation Voltage	V_{BE}	$V_{CE}=5.0V$ $I_C=5.0mA$	0.45		0.75	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=200mA$	20	100		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$			20	pF

Electrical Characteristic Curve



Marking Instructions



Note:

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

h_{FE} Classifications Symbol	R	O	Y
h_{FE} Range	60~120	100~200	160~320
Marking	H83R	H83O	H83Y

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

