

Description

Silicon NPN transistor in a SOT-89 Plastic Package

Applications

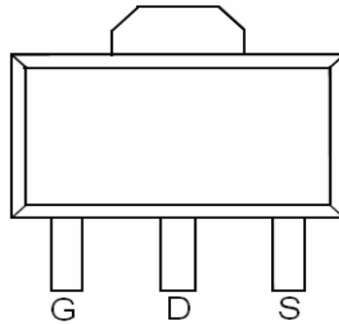
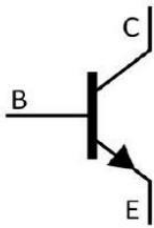
High voltage control circuit.

Features

- High voltage
- Halogen-free product

Symbol	Parameter	Max	Unit
V_{CE0}	collector-emitter voltage	400	V
I_c	collector current (DC)	300	mA

Equivalent Circuit & Pinning



SOT-89 top view

PIN1: Base

PIN 2: Collector

PIN 3: Emitter

hFE Classifications & Marking

Marking	H3D
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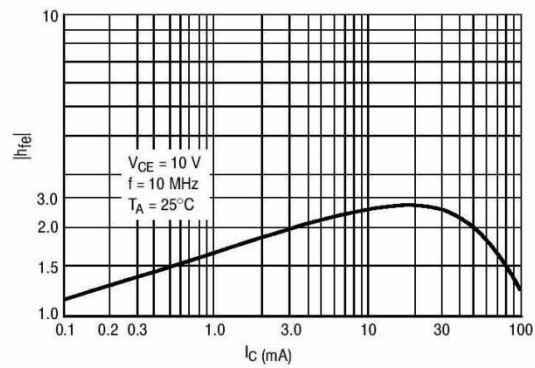
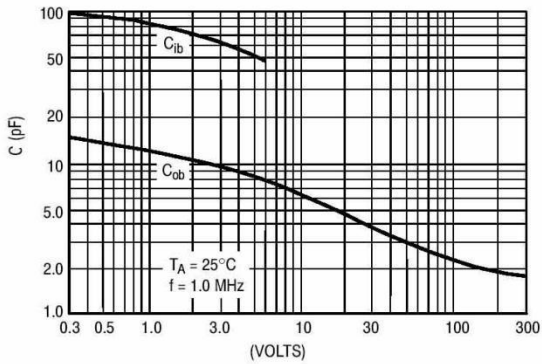
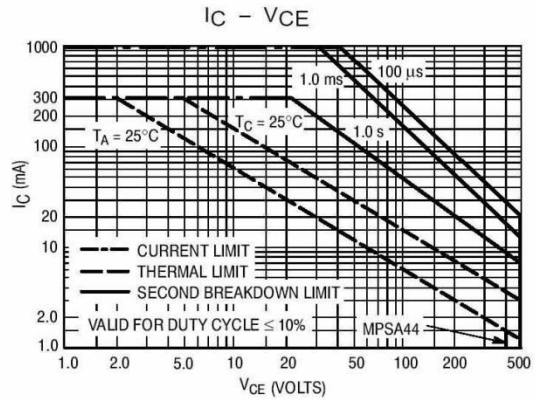
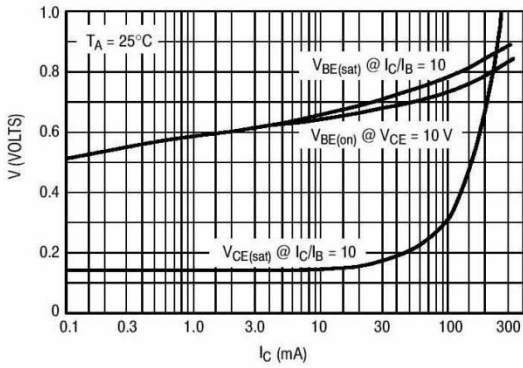
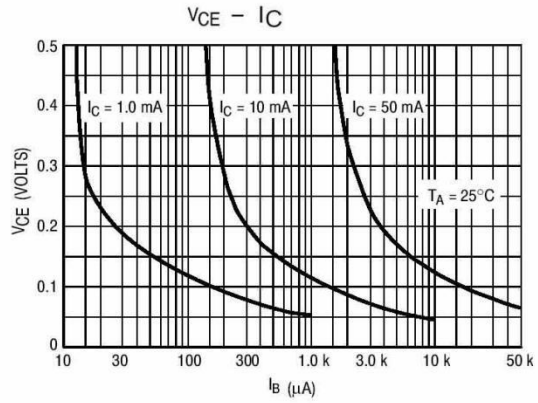
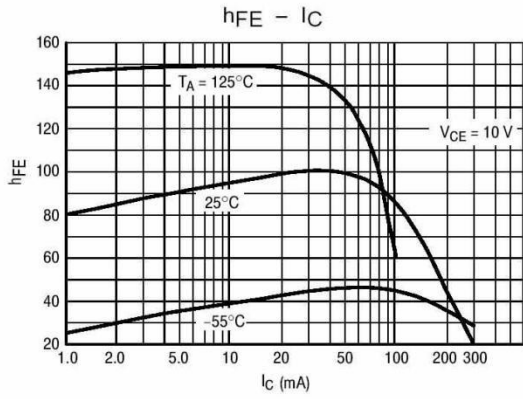
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	500	V
Collector to Emitter Voltage	V_{CEO}	400	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	300	mA
Collector Power Dissipation	P_C	350	mW
Collector Power Dissipation	$P_{C(TC=25^{\circ}C)}$	1.5	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

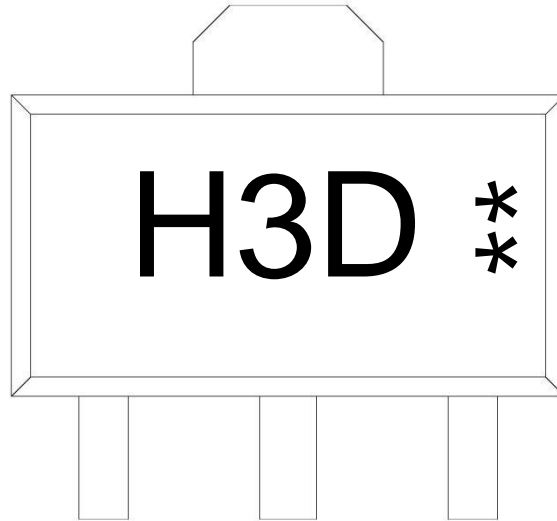
Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=100\mu A$ $I_E=0$	500			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$ $I_B=0$	400			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=10\mu A$ $I_C=0$	6.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=400V$ $I_E=0$			0.1	μA
Emitter Cut-Off Current	I_{CES}	$V_{CE}=400V$ $V_{BE}=0$			1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{BE}=4.0V$ $I_C=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=10V$ $I_C=10mA$	50		200	
	$h_{FE(2)}$	$V_{CE}=10V$ $I_C=100mA$	40			
	$h_{FE(3)}$	$V_{CE}=10V$ $I_C=50mA$	45			
	$h_{FE(4)}$	$V_{CE}=10V$ $I_C=1.0mA$	40			
Collector to Emitter Saturation Voltage	$V_{CE(sat) (1)}$	$I_C=1.0mA$ $I_B=0.1mA$			0.4	V
	$V_{CE(sat) (2)}$	$I_C=10mA$ $I_B=1.0mA$			0.5	V
	$V_{CE(sat) (3)}$	$I_C=50mA$ $I_B=5.0mA$			0.75	V
Emitter to Base Saturation Voltage	$V_{BE(sat)}$	$I_C=10mA$ $I_B=1.0mA$			0.75	V
Collector-Base Capacitance	C_{ob}	$V_{CB}=20V$ $I_E=0$ $f=1.0MHz$			7.0	pF

Electrical Characteristic Curve



Marking Instructions



Note:

- H: Company Code
- 3D: Product Type
- ** : Lot No. Code, code change with Lot No

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

