

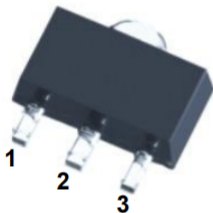
Features

Low $V_{CE(sat)}$, high current.

Applications

General purpose switching and muting, LCD back-lighting, supply line switching circuits.

Pinning

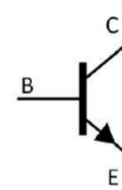


PIN1 : Base

PIN 2 : Collector

PIN 3 : Emitter

Equivalent Circuit



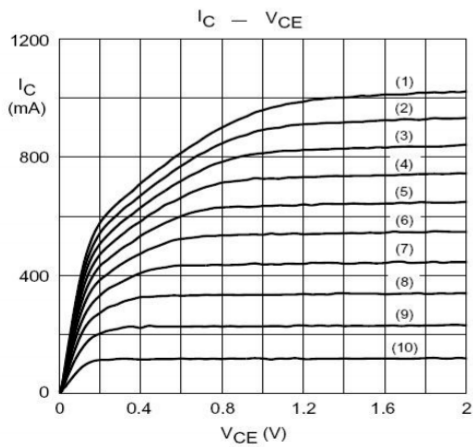
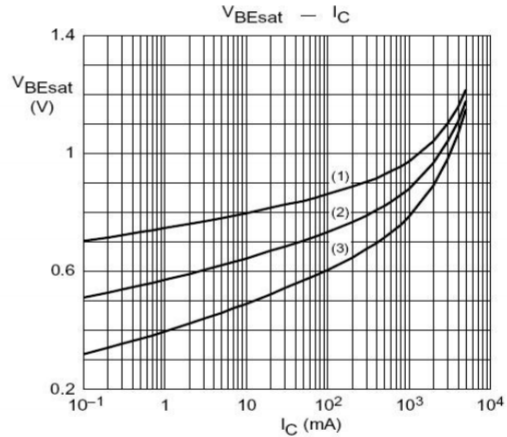
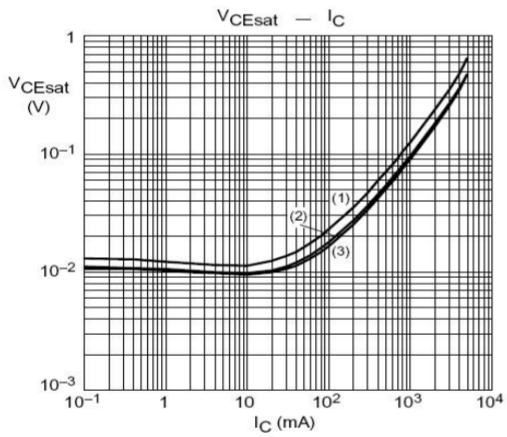
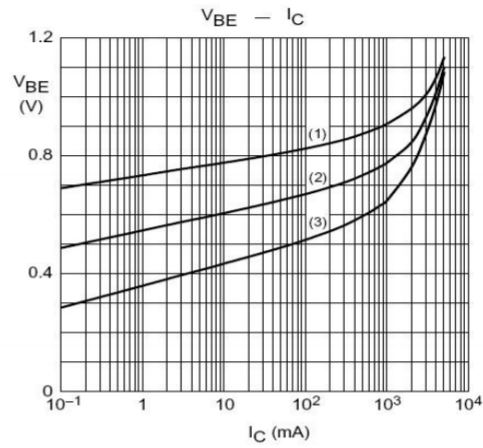
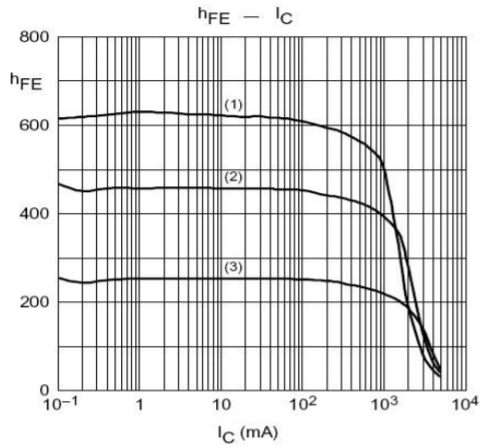
Absolute Maximum Ratings($T_a=25$

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	50	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current - Continuous	I_C	3	A
Collector Base - Continuous	I_B	5	A
Peak Collector Current	I_{CM}	0.5	A
Total Power Dissipation	$P_{tot} \text{ ①}$	550	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-65~150	°C

Electrical Characteristics(Ta=25 °C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=50V$ $I_E=0$			100	nA
Collector Cut-Off Current	I_{CBO}	$V_{CB}=50V$ $I_E=0$ $T_J=150^{\circ}C$			50	μA
Collector Cut-Off Current	I_{CES}	$V_{CE}=50V$ $V_{BE}=0$			100	nA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			100	nA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0V$ $I_C=0.1A$	300			
	$h_{FE(2)}$	$V_{CE}=2.0V$ $I_C=0.5A$	300			
	$h_{FE(3)*}$	$V_{CE}=2.0V$ $I_C=1.0A$	300		700	
	$h_{FE(4)*}$	$V_{CE}=2.0V$ $I_C=2.0A$	200			
	$h_{FE(5)*}$	$V_{CE}=2.0V$ $I_C=3.0A$	100			
Collector to Emitter Saturation Voltage	$V_{CE(sat) (1)}$	$I_C=0.5A$ $I_B=50mA$			80	mV
	$V_{CE(sat) (2)}$	$I_C=2.0A$ $I_B=100mA$			280	mV
Equivalent On-Resistance	$R_{CE(sat) *}$	$I_C=2.0A$ $I_B=200mA$		100	130	m Ω
Base to Emitter Saturation Voltage	$V_{BE(sat) (1)}$	$I_C=2.0A$ $I_B=100mA$			1.1	V
	$V_{BE(sat) (2)*}$	$I_C=3.0A$ $I_B=300mA$			1.2	V
Base-Emitter Turn-On Voltage	$V_{BE(ON)}$	$V_{CE}=2.0V$ $I_C=1.0A$			1.1	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=100mA$ $f=100MHz$	100			MHz
Collector Capacitance	C_C	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$			25	pF

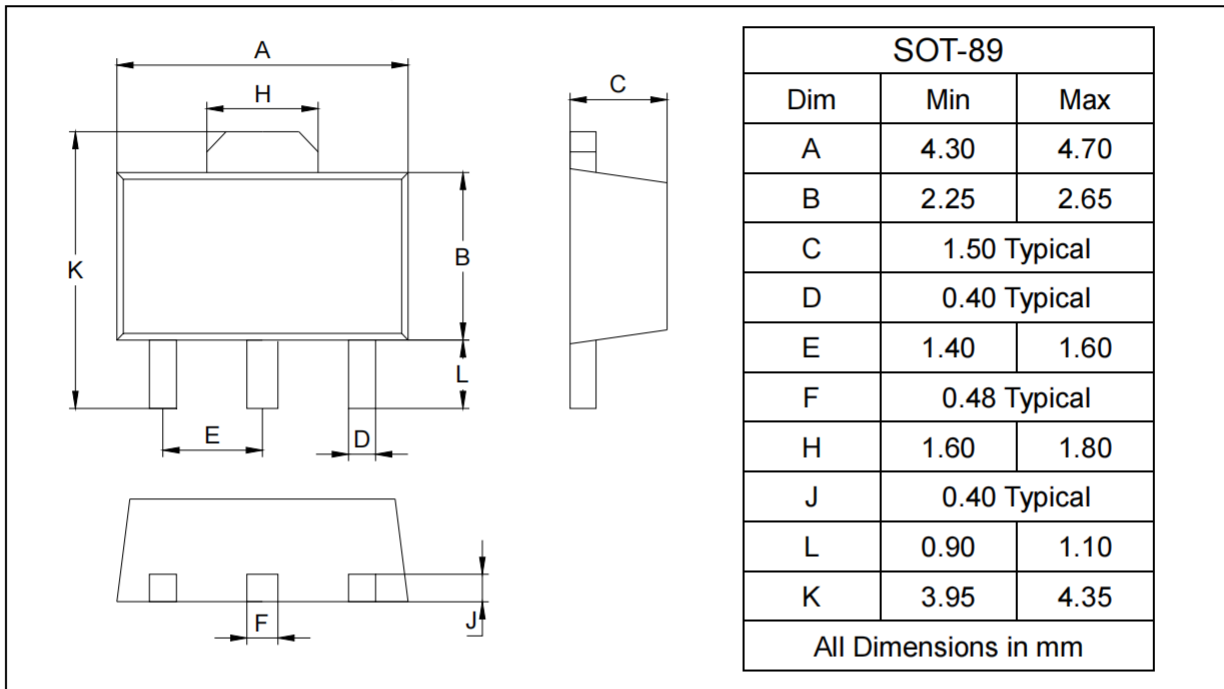
Electrical Characteristic Curve



PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT

