

Description

- Silicon PNP transistor in a TO-92 Plastic Package
- High voltage control circuit

Features

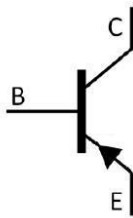
- High voltage low saturation
- Low collector output capacitance
- Complementary pair with MPSA42

Applications

- High voltage control circuit

Symbol	Parameter	Max	Unit
V_{CE0}	collector-emitter voltage	-300	V
I_C	collector current (DC)	-500	mA

Equivalent Circuit & Pinning



PIN1: Collector PIN 2: Base PIN 3: Emitter

hFE Classifications & Marking

See Marking Instructions.

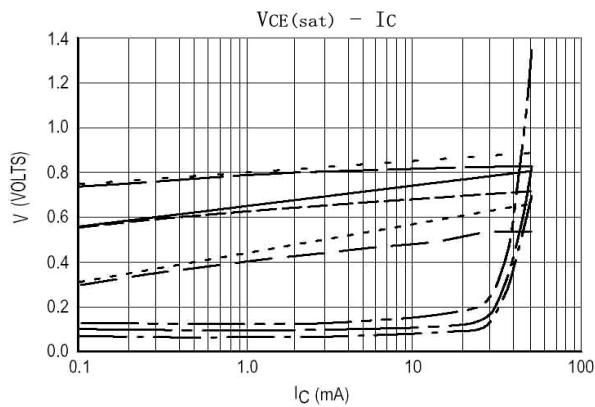
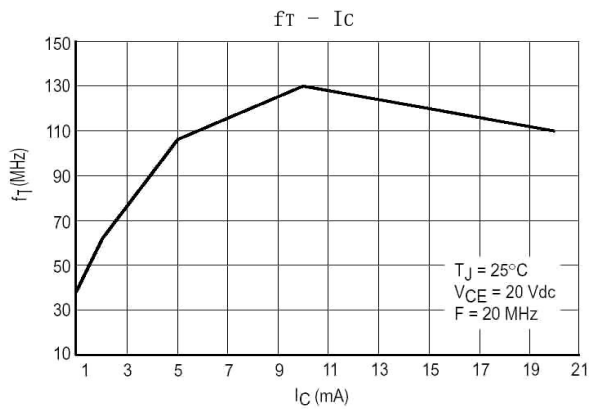
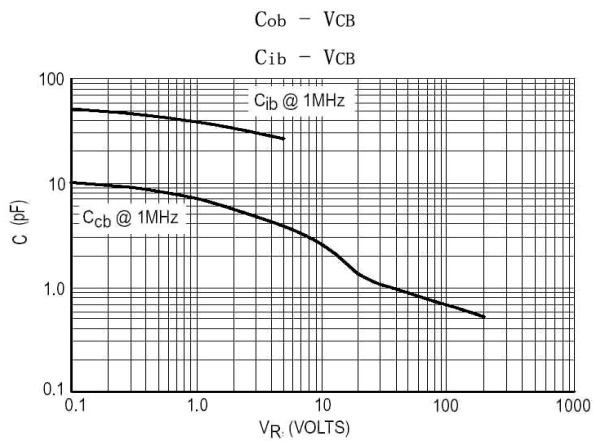
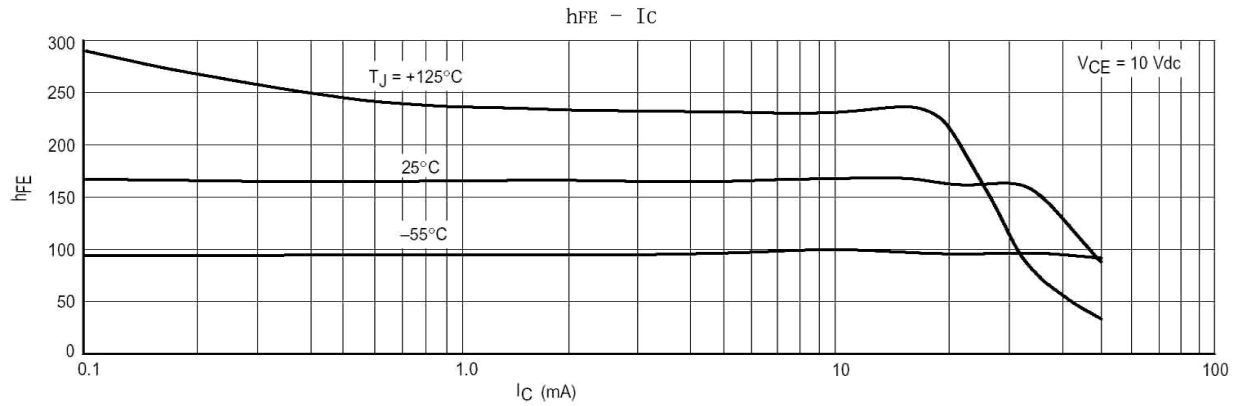
Absolute Maximum Ratings(Ta=25℃)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-300	V
Collector to Emitter Voltage	V_{CEO}	-300	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-500	mA
Base Current - Continuous	I_B	-30	mA
Collector Power Dissipation	P_C	625	mW
Collector Power Dissipation	$P_c(T_c=25^{\circ}\text{C})$	1.5	W
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55~150	℃

Electrical Characteristic (Ta=25℃)

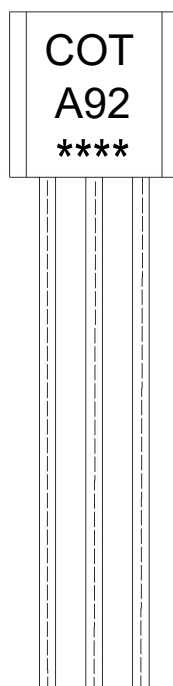
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=-100\mu\text{A}$ $I_E=0$	-300			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=-1.0\text{mA}$ $I_B=0$	-300			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-100\mu\text{A}$ $I_C=0$	-5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-200\text{V}$ $I_E=0$			-0.25	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-3.0\text{V}$ $I_C=0$			-0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-10\text{V}$ $I_C=-10\text{mA}$	40			
	$h_{FE(2)}$	$V_{CE}=-10\text{V}$ $I_C=-30\text{mA}$	25			
	$h_{FE(3)}$	$V_{CE}=-10\text{V}$ $I_C=-1.0\text{mA}$	25			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-20\text{mA}$ $I_B=-2.0\text{mA}$			-0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-20\text{mA}$ $I_B=-2.0\text{mA}$			-0.9	V
Transition Frequency	f_T	$V_{CE}=-20\text{V}$ $f=100\text{MHz}$ $I_C=-10\text{mA}$	50			MHz
Output Capacitance	C_{ob}	$V_{CB}=-20\text{V}$ $f=1.0\text{MHz}$ $I_E=0$			6.0	pF

Electrical Characteristic Curve



$V_{CE(sat)} @ 25^{\circ}\text{C}, I_C/I_B = 10$
 $V_{CE(sat)} @ 125^{\circ}\text{C}, I_C/I_B = 10$
 $V_{CE(sat)} @ -55^{\circ}\text{C}, I_C/I_B = 10$
 $V_{BE(sat)} @ 25^{\circ}\text{C}, I_C/I_B = 10$
 $V_{BE(sat)} @ 125^{\circ}\text{C}, I_C/I_B = 10$
 $V_{BE(sat)} @ -55^{\circ}\text{C}, I_C/I_B = 10$
 $V_{BE(on)} @ 25^{\circ}\text{C}, V_{CE} = 10 \text{ V}$
 $V_{BE(on)} @ 125^{\circ}\text{C}, V_{CE} = 10 \text{ V}$
 $V_{BE(on)} @ -55^{\circ}\text{C}, V_{CE} = 10 \text{ V}$

Marking Instructions



Note:

COT: Company Code.

A92: Product Type.

****: Lot No. Code, code change with Lot No.

Packaging SPEC.

BULK

Package Type	Units					Dimension (unit: mm3)		
	Units/Bag	Bags/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Bag	Inner Box	Outer Box
TO-92	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195
	1,000	10	10,000	10	100,000	135×190	237×172×102	560×245×375

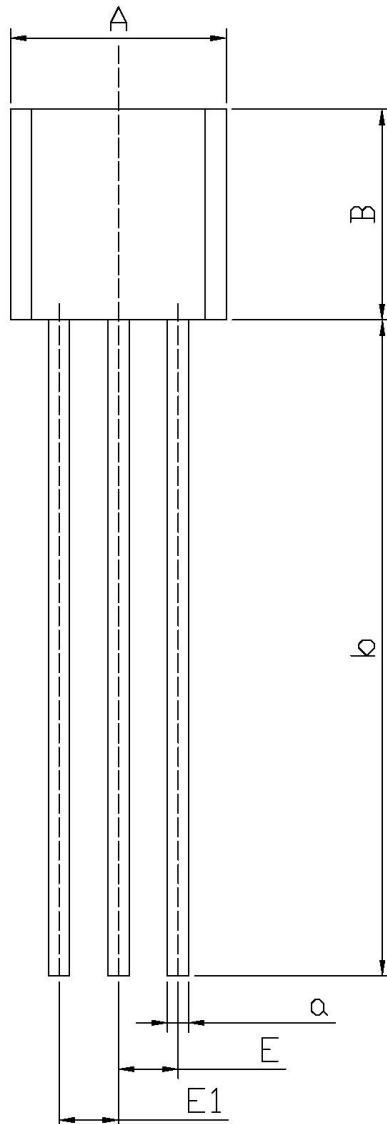
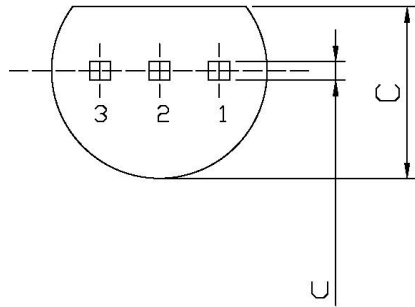
AMMO

Package Type	Units					Dimension (unit: mm3)	
	Units/tape	Tape/Inner Box	Rows/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Inner Box	Outer Box
TO-92	3,000	1	120	10	30,000	328×230×42	480×346×235, 547×407×268

Package Outline Dimensions

TO-92

Unit: mm



Symbol	Dimensions In Millimeters	
	Min	Max
A	4.4	4.8
B	4.3	4.7
b	13	15
a	0.40	0.60
E	1.22	1.32
E1	1.22	1.32
C	3.4	3.8
c	0.30	0.50