

Descriptions

This is Silicon PNP transistor in a TO-92 Plastic Package

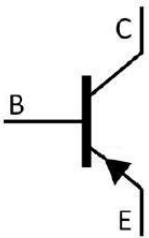
Features

- High current
- Low voltage

Applications

General purpose amplifier and switch requiring collector currents up to 500 mA

Equivalent Circuit



Pinning



PIN1: Collector PIN 2: Base PIN 3: Emitter

hFE Classifications & Marking

See Marking Instructions.

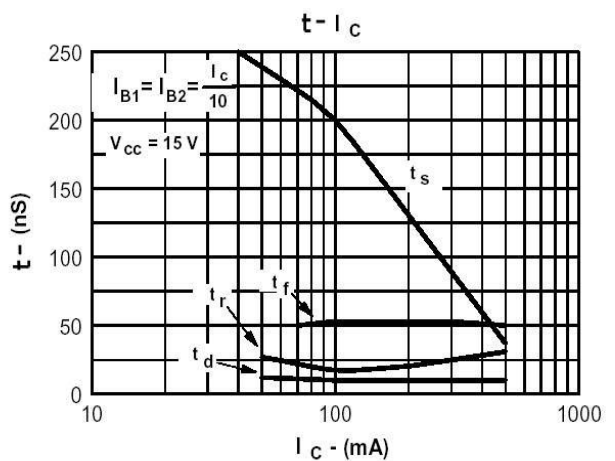
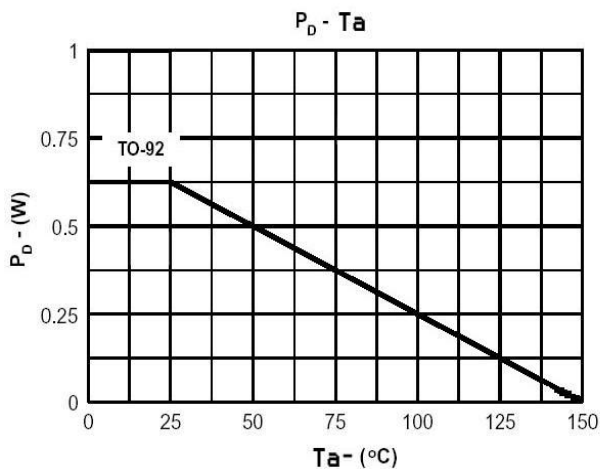
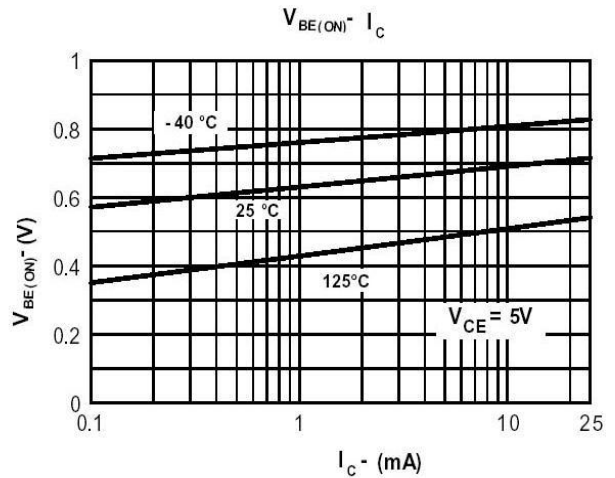
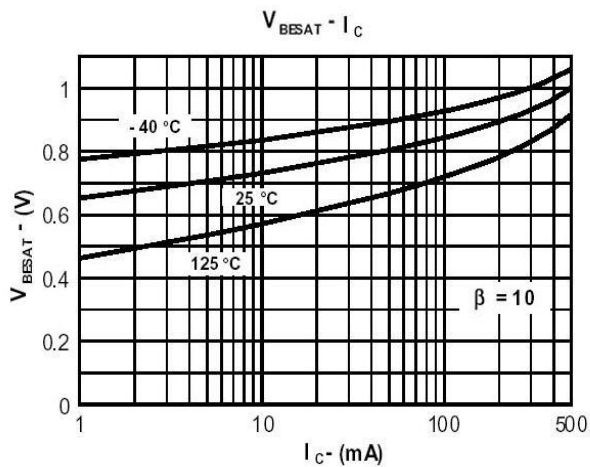
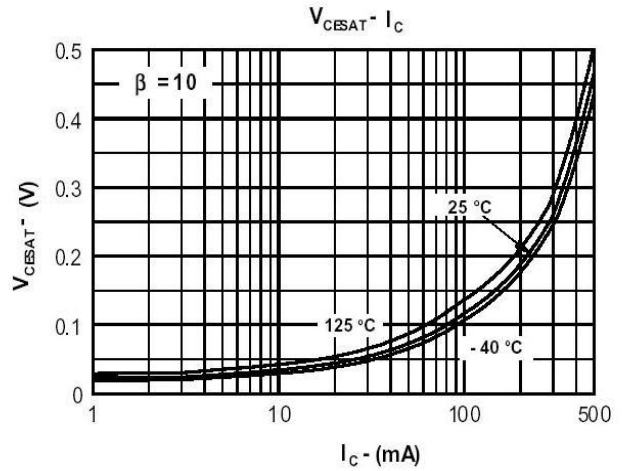
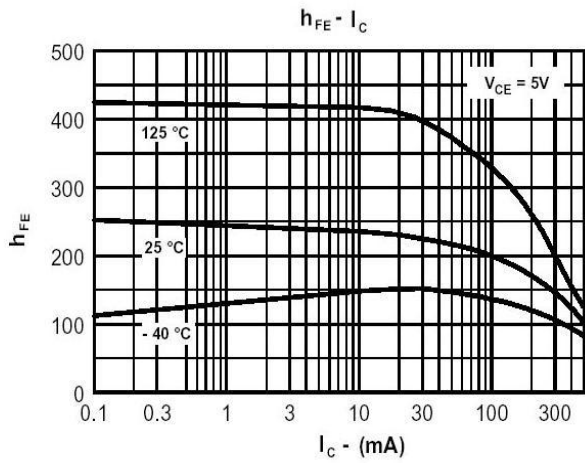
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V _{CB0}	-40	V
Collector to Emitter Voltage	V _{CEO}	-40	V
Emitter to Base Voltage	V _{EBO}	-5.0	V
Collector Current - Continuous	I _C	-600	mA
Collector Power Dissipation	P _C	625	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	200	°C/W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55~150	°C

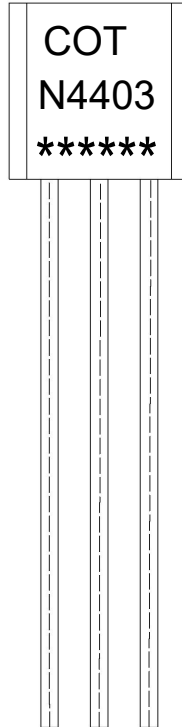
Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V _{CB0}	I _C =-0.1mA I _E =0	-40			V
Collector to Emitter Breakdown Voltage	V _{CEO}	I _C =-1.0mA I _B =0	-40			V
Emitter to Base Breakdown Voltage	V _{EBO}	I _E =-0.1mA I _C =0	-5.0			V
Collector Cut-Off Current	I _{CB0}	V _{CB} =-40V I _E =0			-50	nA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =-5V I _C =0			-50	nA
DC Current Gain	h _{FE(1)}	V _{CE} =-2.0V I _C =-150mA	100		300	
	h _{FE(2)}	V _{CE} =-1.0V I _C =-0.1mA	30			
	h _{FE(3)}	V _{CE} =-1.0V I _C =-1.0mA	60			
	h _{FE(4)}	V _{CE} =-1.0V I _C =-10mA	100			
	h _{FE(5)}	V _{CE} =-2.0V I _C =-500mA	20			
Collector to Emitter Saturation Voltage	V _{CE(sat) (1)}	I _C =-150mA I _B =-15mA			-0.4	V
	V _{CE(sat) (2)}	I _C =-500mA I _B =-50mA			-0.75	V
Base to Emitter Saturation Voltage	V _{BE(sat) (1)}	I _C =-150mA I _B =-15mA	-0.75		-0.95	V
	V _{BE(sat) (2)}	I _C =-500mA I _B =-50mA			-1.3	V
Current Gain Bandwidth Product	f _T	V _{CE} =-10V I _C =-20mA	200			MHz
Delay Time	t _d	V _{CC} =-30V I _C =-150mA I _{B1} =-15mA			15	ns
Rise Time	t _r				20	ns
Storage Time	t _s	V _{CC} =-30V I _C =-150mA I _{B1} =I _{B2} =-15mA			225	ns
Fall Time	t _f				30	ns

Electrical Characteristic Curve



Marking Instructions



Note:

COT: Company Code.

N4403: Product Type Code.

*****: *: Inner Code * : Year Code **: Week Code **: Lot Code

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

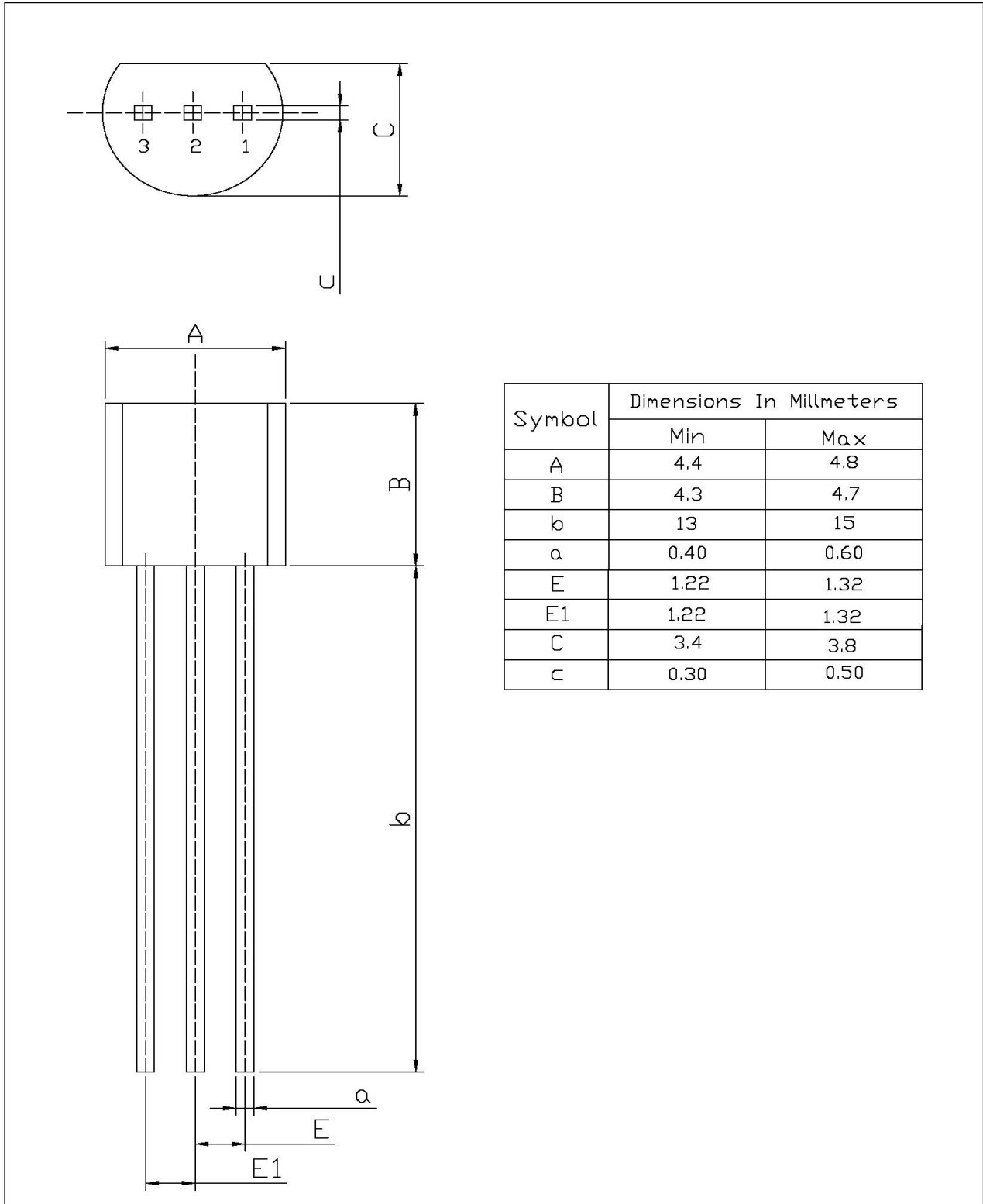
AMMO

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 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