

2N4402
2N4403

SILICON
PNP TRANSISTORS



TO-92 CASE



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N4402 and 2N4403 are PNP silicon transistors designed for general purpose amplifier and switching applications. NPN complementary types are 2N4400 and 2N4401.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Power Dissipation
Operating and Storage Junction Temperature

SYMBOL		UNITS
V _{CBO}	40	V
V _{CEO}	40	V
V _{EBO}	5.0	V
I _C	600	mA
P _D	625	mW
T _J , T _{stg}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS: (T_A=25°C)

SYMBOL	TEST CONDITIONS	2N4402		2N4403		UNITS
		MIN	MAX	MIN	MAX	
I _{CEV}	V _{CE} =35V, V _{EB} =0.4V	-	0.1	-	0.1	μA
BV _{CBO}	I _C =0.1mA	40	-	40	-	V
BV _{CEO}	I _C =1.0mA	40	-	40	-	V
BV _{EBO}	I _E =0.1mA	5.0	-	5.0	-	V
V _{CE(SAT)}	I _C =150mA, I _B =15mA	-	0.4	-	0.4	V
V _{CE(SAT)}	I _C =500mA, I _B =50mA	-	0.75	-	0.75	V
V _{BE(SAT)}	I _C =150mA, I _B =15mA	0.75	0.95	0.75	0.95	V
V _{BE(SAT)}	I _C =500mA, I _B =50mA	-	1.3	-	1.3	V
h _{FE}	V _{CE} =1.0V, I _C =0.1mA	-	-	30	-	
h _{FE}	V _{CE} =1.0V, I _C =1.0mA	30	-	60	-	
h _{FE}	V _{CE} =1.0V, I _C =10mA	50	-	100	-	
h _{FE}	V _{CE} =2.0V, I _C =150mA	50	150	100	300	
h _{FE}	V _{CE} =2.0V, I _C =500mA	20	-	20	-	
h _{fe}	V _{CE} =10V, I _C =1.0mA, f=1.0kHz	30	250	60	500	
f _T	V _{CE} =10V, I _C =20mA, f=100MHz	150	-	200	-	MHz
C _{ob}	V _{CB} =10V, I _E =0, f=140kHz	-	8.5	-	8.5	pF
C _{ib}	V _{BE} =0.5V, I _C =0, f=140kHz	-	30	-	30	pF
t _{on}	V _{CC} =30V, V _{EB(OFF)} =2.0V, I _C =150mA, I _{B1} =15mA	-	35	-	35	ns
t _{off}	V _{CC} =30V, I _C =150mA, I _{B1} =I _{B2} =15mA	-	255	-	255	ns

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TO-92 CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

LEAD CODE:

- 1) Emitter
- 2) Base
- 3) Collector

MARKING:
 FULL PART NUMBER

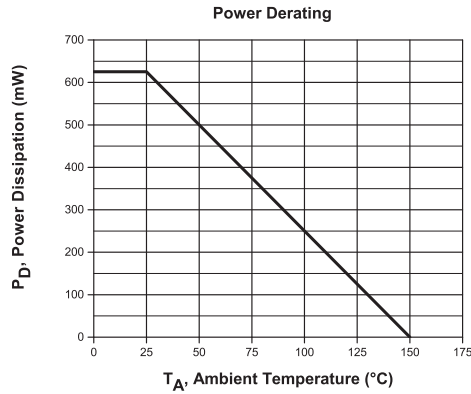
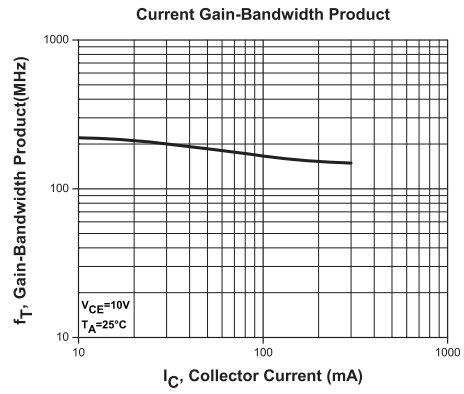
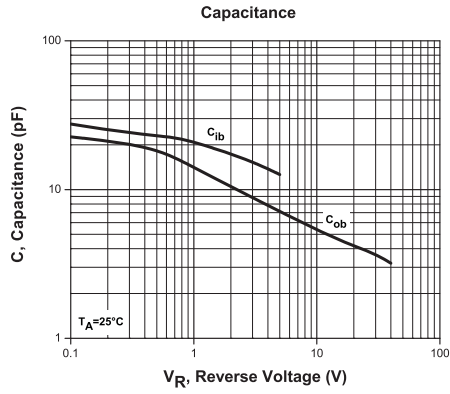
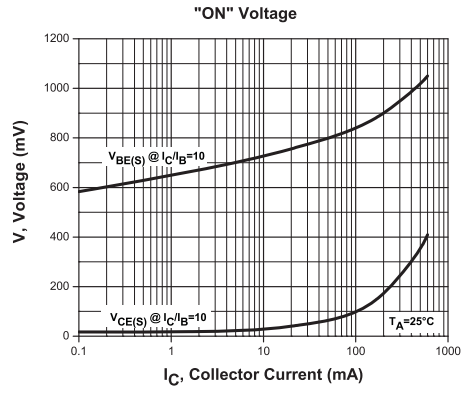
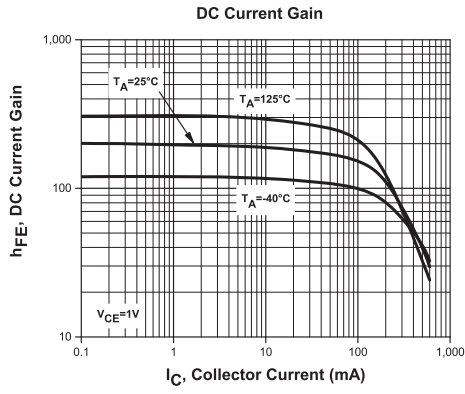
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TYPICAL ELECTRICAL CHARACTERISTICS



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