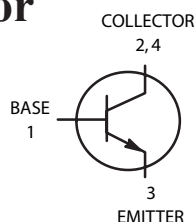
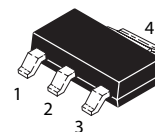


NPN Silicon Planar Epitaxial Transistor

(Pb) Lead(Pb)-Free



1.BASE
2.COLLECTOR
3.EMITTER
4.COLLECTOR



SOT-223

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	300	V
Collector-Base Voltage	V _{CBO}	300	V
Emitter-Base Voltage	V _{EBO}	6	V
Collector Current (DC)	I _{C(DC)}	500	mA
Total Device Dissipation T _A =25°C	P _D	2	W
Junction Temperature	T _j	150	°C
Storage, Temperature	T _{stg}	-55 to +150	°C

Device Marking

PZTA42=A42

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage (I _C =1mA)	V _{(BR)CEO}	300	-	-	V
Collector-Base Breakdown Voltage (I _C =100μA)	V _{(BR)CBO}	300	-	-	V
Emitter-Base Breakdown Voltage (I _E =10 μA)	V _{(BR)EBO}	6	-	-	V
Collector-Emitter Cutoff Current (V _{CB} =300V)	I _{CBO}	-	-	100	nA
Emitter-Base Cutoff Current (V _{EB} =6V)	I _{EBO}	-	-	100	nA

ON CHARACTERISTICS

DC Current Gain ($V_{CE} = 10V, I_C = 1mA$) ($V_{CE} = 10V, I_C = 10mA$) ($V_{CE} = 10V, I_C = 30mA$)	h_{FE1} h_{FE2} h_{FE3}	25 40 40	- - -	- - -	- - -
Collector-Emitter Saturation Voltages ($I_C = 20mA, I_B = 2mA$)	$V_{CE(sat)}$	-	-	500	mV
Base-Emitter Saturation Voltages ($I_C = 20mA, I_B = 2mA$)	$V_{BE(sat)}$	-	-	900	mV

DYNAMIC CHARACTERISTICS

Current-Gain—Bandwidth Product ($V_{CE} = 20V, I_C = 10mA, f = 100MHz$)	f_T	50	-	-	MHz
Output Capacitance ($V_{CB} = 20V_{dc}, f = 1MHz$)	C_{ob}	-	-	3	pF

Typical Characteristics

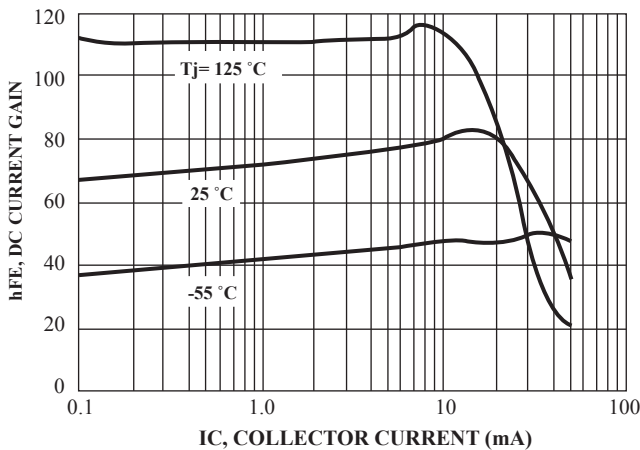


Figure .1 DC Current Gain

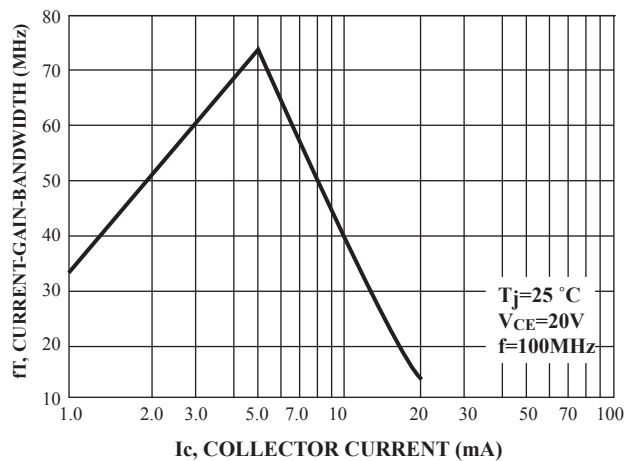


Figure .2 Current-Gain-Bandwidth

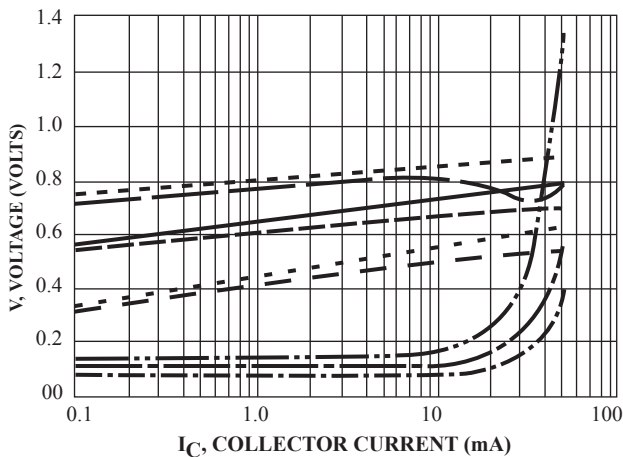
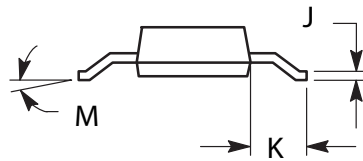
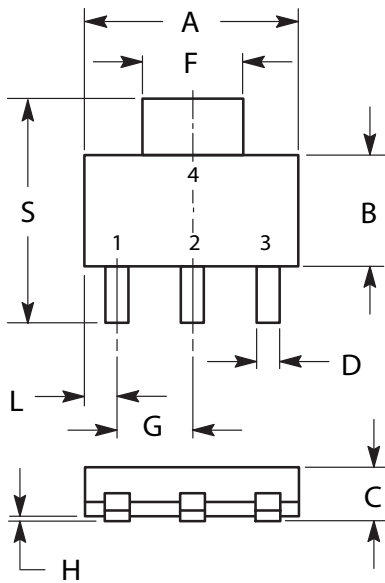


Figure.3 "On" Voltages

- V_{CE(sat)}@25 °C, ICIB = 10
- - - V_{CE(sat)}@125 °C, ICIB = 10
- · · V_{CE(sat)}@ -55 °C, ICIB = 10
- V_{BE(sat)}@25 °C, ICIB = 10
- - - V_{BE(sat)}@125 °C, ICIB = 10
- · · V_{BE(sat)}@ -55 °C, ICIB = 10
- V_{BE(on)}@25 °C, V_{CE} = 10V
- - - V_{BE(on)}@125 °C, V_{CE} = 10V
- · · V_{BE(on)}@ -55 °C, V_{CE} = 10V

SOT-223 Outline Dimensions

unit:mm



DIM	MILLIMETERS	
	MIN	MAX
A	6.30	6.70
B	3.30	3.70
C	1.50	1.75
D	0.60	0.89
F	2.90	3.20
G	2.20	2.40
H	0.020	0.100
J	0.24	0.35
K	1.50	2.00
L	0.85	1.05
M	0°	10°
S	6.70	7.30