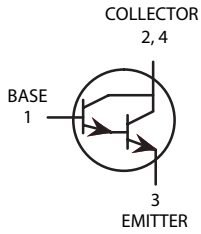
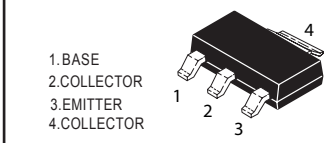
WEITRON

PZTA14

Darlington NPN Silicon Planar Epitaxial Transistor

Lead(Pb)-Free





SOT-223

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	30	V
Collector-Base Voltage	V_{CBO}	30	V
Emitter-Base Voltage	V_{EBO}	10	V
Collector Current (DC)	$I_{C(DC)}$	300	mA
Total Device Disspation T_A=25°C	P_D	2	W
Junction Temperature	T_j	150	°C
Storage, Temperature	Tstg	-55 to +150	°C

Device Marking

PZTA14=A14

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage (I_C = 1mA , I_B=0)	$V_{(BR)CEO}$	30	-	V
Collector-Base Breakdown Voltage (I_C=100μA , I_E=0)	$V_{(BR)CBO}$	30	-	V
Emitter-Base Breakdown Voltage (I_E = 10 μA , I_C=0)	$V_{(BR)EBO}$	10	-	V
Collector-Base Cutoff Current (V_{CB} = 30V)	I_{CBO}	-	100	nA
Emitter-Base Cutoff Current (V_{EB} = 10Vdc , I_C=0)	I_{EBO}	-	100	nA

NOTE: 1.Device mounted on an epoxy printed circuit board 1.575 inches×1.575 inches×0.059 inches; mounting pad for the collector lead min. 0.93 inches.^{2}

ELECTRICALCHARACTERISTICS— Continued (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
ON CHARACTERISTICS					
DC Current Gain (I_C =10 mA, V_{CE} = 5 V) (I_C = 100 mA, V_{CE} = 5 V)	h_{FE1} h_{FE2}	10K 20K	- -	- -	-
Collector-Emitter Saturation Voltage (I_C = 100 mA, I_B = 0.1 mA)	$V_{CE(sat)}$	-	-	1.5	V
Base-Emitter Saturation Voltage (I_C = 100mA, V_{CE} = 5 V)	$V_{BE(on)}$	-	-	2	V
DYNAMIC CHARACTERISTICS					
Current-Gain-Bandwidth Product (I_C = 10 mA, V_{CE} = 5V, f = 100 MHz)	f_T	125	-	-	MHz

Characieristics Curve

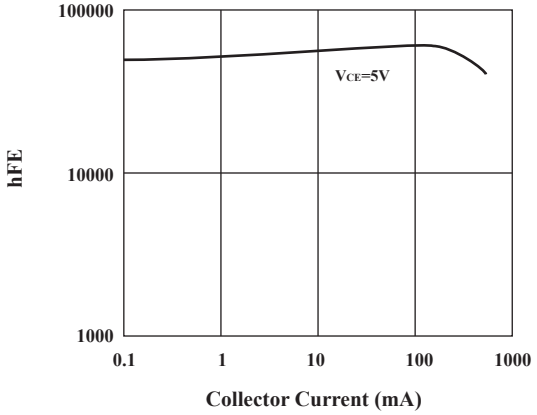


Fig.1 Current Gain & Collector Current

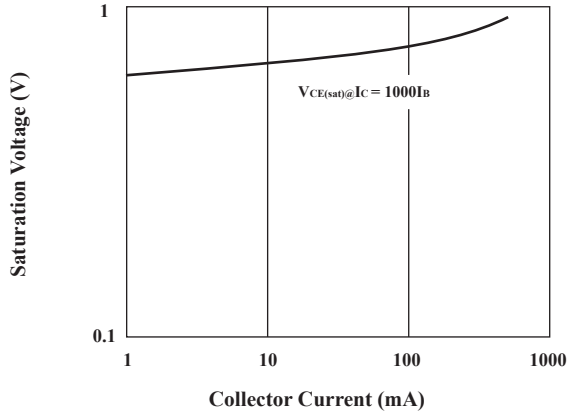


Fig.2 Saturation Voltage & Collector Current

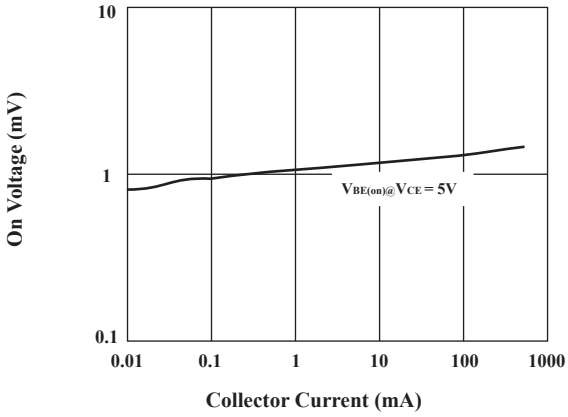


Fig.3 On Voltage & Collector Current

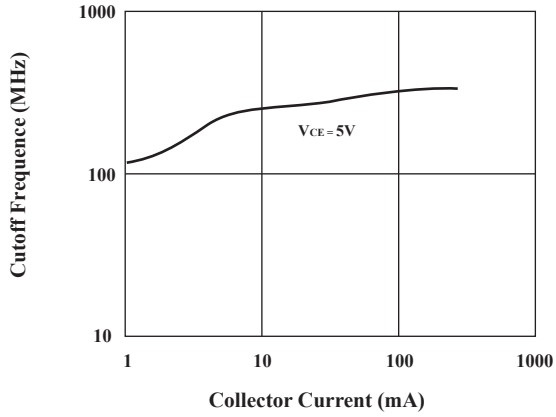


Fig.4 Cutoff Frequency & Collector Current

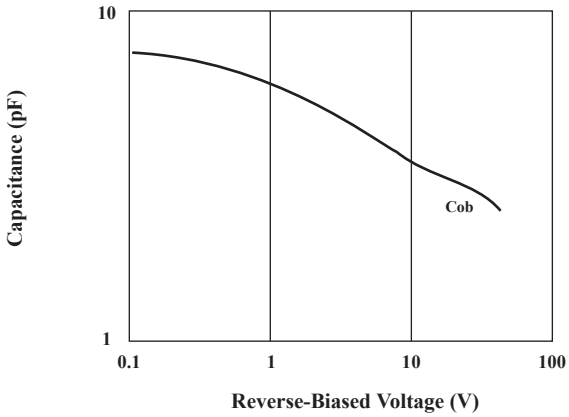


Fig.5 Capacitance & Reverse-Biased Voltage

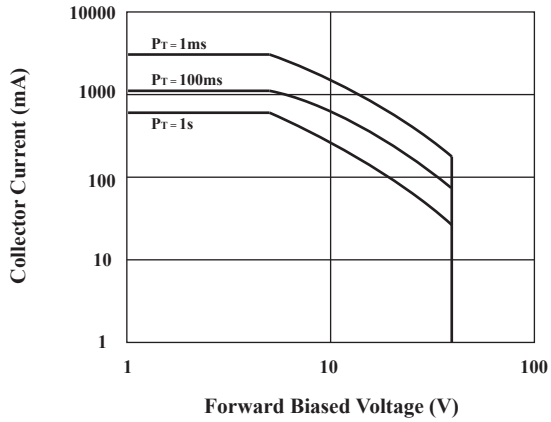
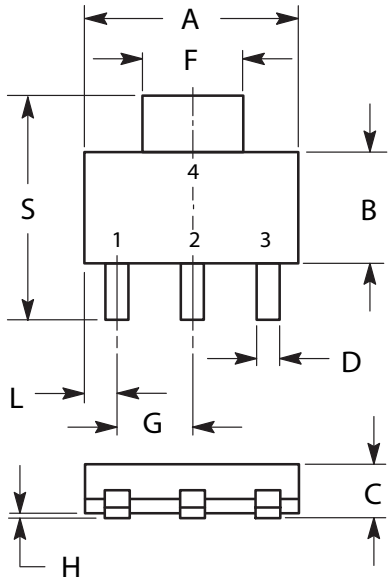
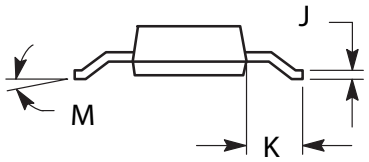


Fig.6 Safe Operating Area

SOT-223 Outline Dimensions

unit:mm





	MILLIMETERS	
DIM	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