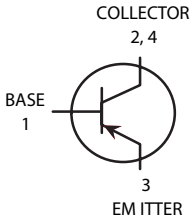
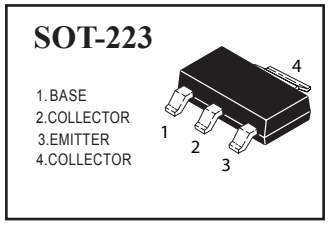
WEITRON

PZT159

PNP Silicon Planar High Current Transistor

Lead(Pb)-Free





ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

Rating	Symbol	Value	Unit
Collector to Base Voltage	V_{CBO}	-100	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Collector to Base Voltage	V_{EBO}	-6	V
Collector Current	I_C(DC)	-5	A
Collector Current	I_C(Pulse)	-15	A
Total Device Disspation T_A=25°C	P_D	3	W
Junction Temperature	Tj	+150	˚C
Storage, Temperature	Tstg	-55 to +150	˚C

*Device mounted in a typical manner on a P.C.B with copper 4 inches x 4 inches(min).

Device Marking

PZT159 =159

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Max	Unit
Collector-Base Breakdown Voltage I_C=-100μA, I_E=0	BV_{CBO}	-100	-	-	V
Collector-Emitter Breakdown Voltage(1) I_C=-10mA, I_B=0	BV_{CEO}	-60	-	-	V
Emitter-Base Breakdown Voltage I_E=-100μA, I_C=0	BV_{EBO}	-6	-	-	V
Collector Cut-Off Current V_{CB}=-80V, I_E=0	I_{CBO}	-	-	-50	nA
Collector Cut-Off Current V_{CES}=-60V	I_{CES}	-	-	-50	nA
Emitter-Cut-Off Current V_{EB}=-6V, I_C=0	I_{EBO}	-	-	-10	nA

ELECTRICAL CHARACTERISTICS (T_A=25°C Unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
ON CHARACTERISTICS(1)					
DC Current Gain V_{CE}=-1V, I_C=-10mA V_{CE}=-1V, I_C=-2A V_{CE}=-1V, I_C=-5A V_{CE}=-1V, I_C=-10A	 h_{FE1} h_{FE2} h_{FE3} h_{FE4}	 100 100 75 10	 200 200 90 25	 - 300 - -	-
Collector-Emitter Saturation Voltage I_C=-100mA, I_B=-10mA I_C=-1A, I_B=-100mA I_C=-2A, I_B=-200mA I_C=-5A, I_B=-500mA	$V_{CE(sat)}$	 - - - -	 -20 -85 -155 -370	 -50 -140 -210 -460	mV
Base-Emitter Saturation Voltage I_C=-5A, I_B=-500mA	$V_{BE(sat)}$	-	-1.08	-1.24	V
Base-Emitter On Voltage V_{CE}=-1V, I_C=-5A	$V_{BE(on)}$	-	-0.935	-1.07	V

DYNAMIC CHARACTERISTICS

Transition Frequency V_{CE}=-10V, I_C=-100mA, f=50MHz	f_T	-	120	-	MHz
Output Capacitance V_{CB}=-10V, I_E=0, f=1MHz	C_{ob}	-	74	-	pF

SWITCHING TIMES

Switching Times V_{CC}=-10V,I_C=-2A, I_{B1}=I_{B2}=-200mA	t_{on}	-	82	-	ns
	t_{off}	-	350	-	

Note 1.Pulse Test : Pulse width < 300μs, Duty cycle ≤ 20%.

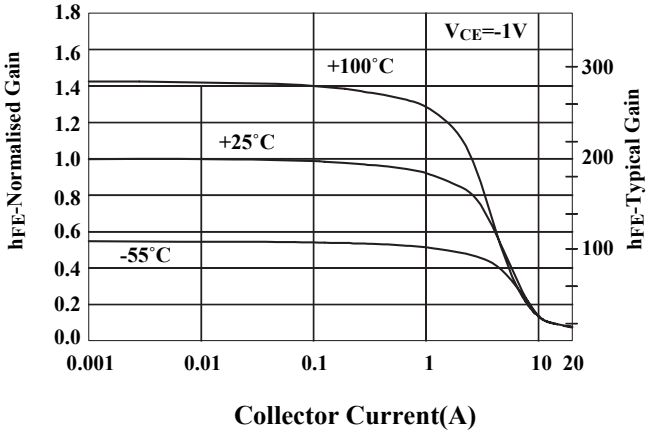


Fig.1 Current Gain - Collector Current

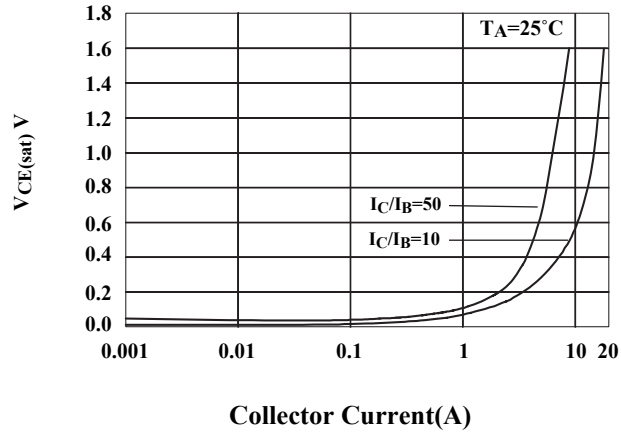


Fig.2 Saturation Voltage - Collector Current

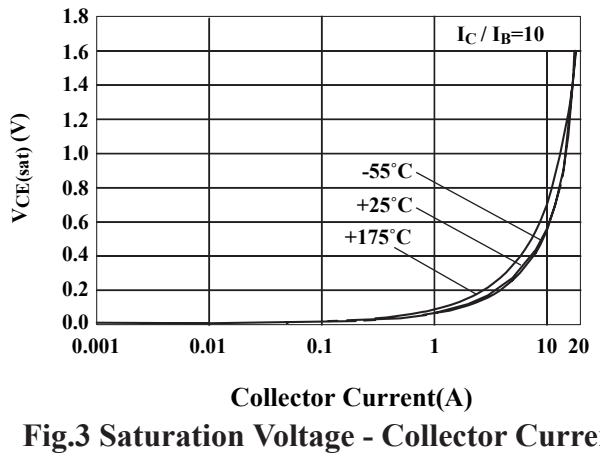


Fig.3 Saturation Voltage - Collector Current

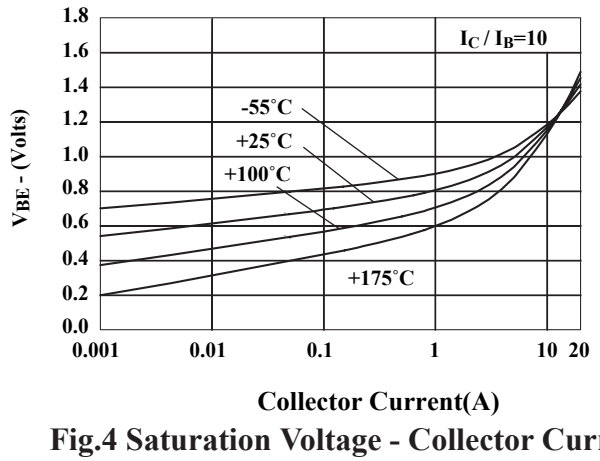


Fig.4 Saturation Voltage - Collector Current

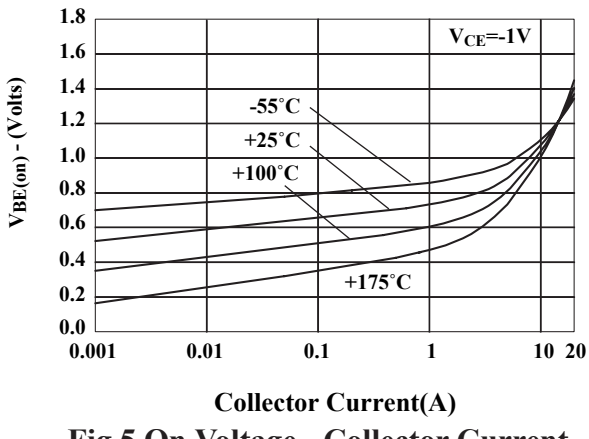


Fig.5 On Voltage - Collector Current

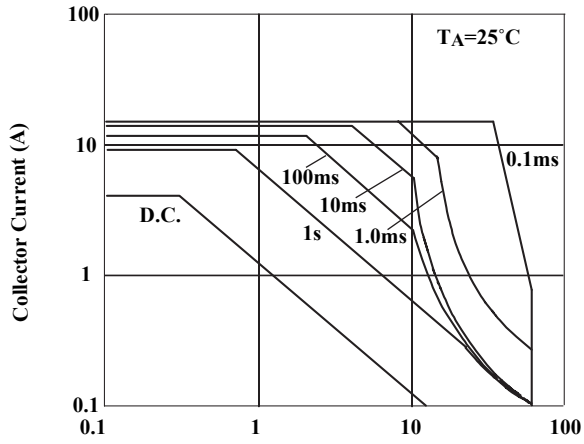
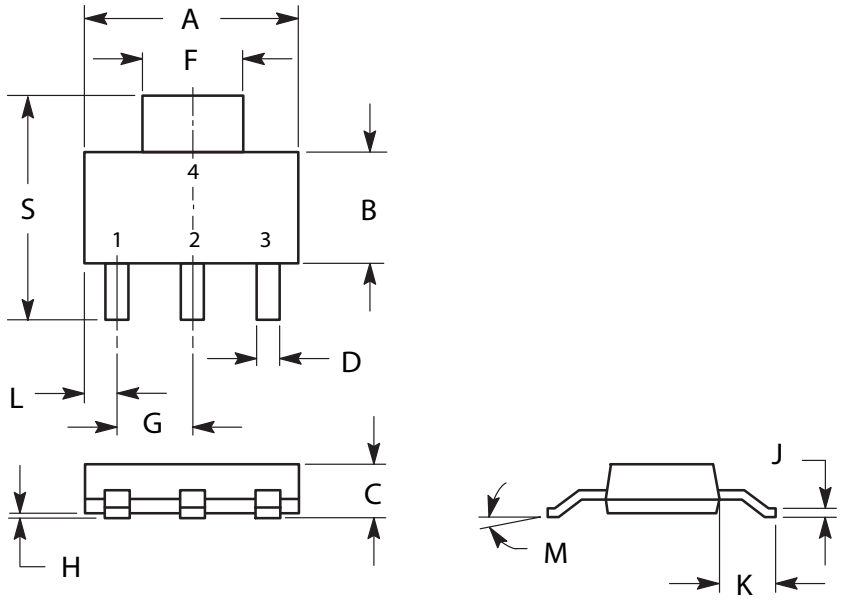


Fig.6 Safe Operating Area

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