

RoHS Compliant Product

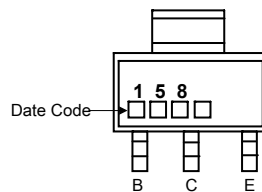
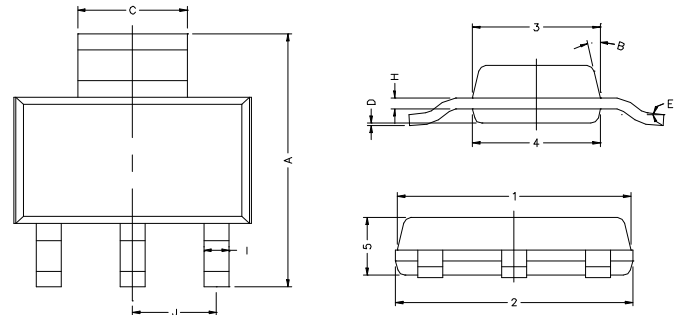
SOT-223

Description

The PZT158 is designed for general purpose switching and amplifier applications.

Features

- * 6Amps Continuous Current, Up To 20Amps Peak Current
- * Excellent Gain Characteristic, Specified Up To 10Amps
- * Very Low Saturation Voltages



REF.	Min.	Max.	REF.	Min.	Max.
A	6.70	7.30	B	13 TYP.	
C	2.90	3.10	J	2.30 REF.	
D	0.02	0.10	1	6.30	6.70
E	0°	10°	2	6.30	6.70
I	0.60	0.80	3	3.30	3.70
H	0.25	0.35	4	3.30	3.70
			5	1.40	1.80

MAXIMUM RATINGS* (T_{amb} = 25°C, unless otherwise specified)

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	150	V
V _{CE0}	Collector-Emitter Voltage	60	V
V _{EB0}	Emitter-Base Voltage	6	V
I _C	Collector Current (DC)	6	A
	Collector Current (Pulse)	20	
P _D	Total Power Dissipation	3	W
T _J , T _{stg}	Junction and Storage Temperature	-55~-150	°C

*The power which can be dissipated assuming the device is mounted in a typical on a P.C.B. with copper equal to 4 square inch min..

ELECTRICAL CHARACTERISTICS T_{amb} = 25°C unless otherwise specified

Parameter	Symbol	Min	Typ.	Max	Uni	Test Conditions
Collector-Base Breakdown Voltage	BV _{CB0}	150	-	-	V	I _C = 100μA, I _E = 0
Collector-Emitter Breakdown Voltage	*BV _{CE0}	60	-	-	V	I _C = 10mA, I _B = 0
Emitter-Base Breakdown Voltage	BV _{EB0}	6	-	-	V	I _E = 100μA, I _C = 0
Collector-Base Cutoff Current	I _{CB0}	-	-	50	nA	V _{CB} = 120V, I _E = 0
Collector-Base Cutoff Current	I _{CES}	-	-	50	nA	V _{CE} = 60V
Emitter-Base Cutoff Current	I _{EB0}	-	-	10	nA	V _{EB} = 6V, I _C = 0
Collector Saturation Voltage	*V _{CE(sat)1}	-	-	50	mV	I _C = 100mA, I _B = 5mA
	*V _{CE(sat)2}	-	-	100		I _C = 1A, I _B = 50mA
	*V _{CE(sat)3}	-	-	170		I _C = 2A, I _B = 50mA
	*V _{CE(sat)4}	-	-	375		I _C = 6A, I _B = 300mA
Base Saturation Voltage	*V _{BE(sat)}	-	-	1.2	V	I _C = 6A, I _B = 300mA
Base-Emitter Voltage	*V _{BE(on)}	-	-	1.15	V	V _{CE} = 1V, I _C = 6A
DC Current Gain	*h _{FE1}	100	-	-		V _{CE} = 1V, I _C = 10mA
	*h _{FE2}	100	200	300		V _{CE} = 1V, I _C = 2A
	*h _{FE3}	75	-	-		V _{CE} = 1V, I _C = 5A
	*h _{FE4}	25	-	-		V _{CE} = 1V, I _C = 10A
Gain-Bandwidth Product	f _T	-	130	-	MHz	V _{CE} = 10V, I _C = 100mA, f = 50MHz
Output Capacitance	C _{ob}	-	45	-	pF	V _{CB} = 10V, I _E = 0, f = 1MHz
On-Time	T _{on}	-	45	-	nS	V _{CC} = 10V, I _C = 1A, I _{B1} = I _{B2} = 100mA
Off-Time	T _{off}	-	1100	-		

*Measured under pulse condition. Pulse width ≤ 300μs, Duty Cycle ≤ 2%

Spice parameter data is available upon request for this device.

CHARACTERISTIC CURVES

