

RoHS Compliant Product

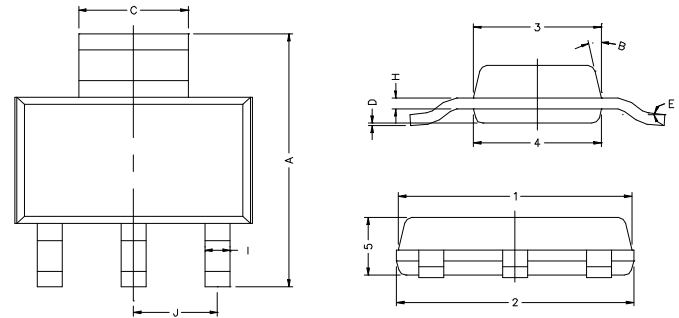
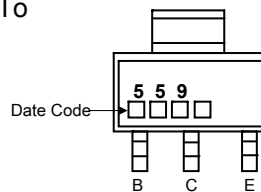
SOT-223

Description

The PZT559 is designed for general purpose switching and amplifier applications.

Features

- * Excellent Gain Characteristic Specified Up To 3 Amps.
- * 4 Amps Continuous Current, Up To 10 Amps Peak Current
- * Very Low Saturation Voltages



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		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* ($T_{amb}=25^{\circ}\text{C}$, unless otherwise specified)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-180	V
V_{CEO}	Collector-Emitter Voltage	-140	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current (DC)	-4	A
I_{CM}	Collector Current (Pulse)	-10	A
P_d	Total Power Dissipation	3	W
T_J, T_{stg}	Junction and Storage Temperature	-55~+150	$^{\circ}\text{C}$

*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 $T_{amb}=25^{\circ}\text{C}$ unless otherwise specified

Parameter	Symbol	Min	Typ.	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	BV_{CBO}	-180	-	-	V	$I_C=-100\mu\text{A}, I_E=0$
Collector-Base Breakdown Voltage	BV_{CER}	-180	-	-	V	$I_C=-1\mu\text{A}, R_B \leq 1\text{K}\Omega$
Collector-Emitter Breakdown Voltage	* BV_{CEO}	-140	-	-	V	$I_C=-10\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	BV_{EBO}	-6	-	-	V	$I_E=-100\mu\text{A}, I_C=0$
Collector-Base Cutoff Current	I_{CBO}	-	-	-50	nA	$V_{CB}=-150\text{V}, I_E=0$
Collector-Base Cutoff Current	I_{CER}	-	-	-50	nA	$V_{CB}=-150\text{V}, R \leq 1\text{K}\Omega$
Emitter-Base Cutoff Current	I_{EBO}	-	-	-10	nA	$V_{EB}=-6\text{V}, I_C=0$
Collector Saturation Voltage	* $V_{CE(sat)1}$	-	-	-60	mV	$I_C=-100\text{mA}, I_B=-5\text{mA}$
	* $V_{CE(sat)2}$	-	-	-120		$I_C=-500\text{A}, I_B=-50\text{mA}$
	* $V_{CE(sat)3}$	-	-	-150		$I_C=-1\text{A}, I_B=-100\text{mA}$
	* $V_{CE(sat)4}$	-	-	-370		$I_C=-3\text{A}, I_B=-300\text{mA}$
Base Saturation Voltage	* $V_{BE(sat)}$	-	-	-1.11	V	$I_C=-3\text{A}, I_B=-300\text{mA}$
Base-Emitter Voltage	* $V_{BE(on)}$	-	-	-0.95	V	$I_C=-3\text{A}, V_{CE}=-5\text{V}$
DC Current Gain	* h_{FE1}	100	-	-		$V_{CE}=-5\text{V}, I_C=-10\text{mA}$
	* h_{FE2}	100	200	300		$V_{CE}=-5\text{V}, I_C=-1\text{A}$
	* h_{FE3}	75	140	-		$V_{CE}=-5\text{V}, I_C=-3\text{A}$
	* h_{FE4}	-	10	-		$V_{CE}=-5\text{V}, I_C=-10\text{A}$
Gain-Bandwidth Product	f_T	-	110	-	MHz	$V_{CE}=-10\text{V}, I_C=-100\text{mA}, f=50\text{MHz}$
Output Capacitance	C_{ob}	-	40	-	pF	$V_{CB}=-20\text{V}, f=1\text{MHz}$
On-Time	T_{on}	-	68	-	nS	$V_{CC}=-50\text{V}, I_C=-1\text{A}, I_{B1}=I_{B2}=-100\text{mA}$
Off-Time	T_{off}	-	1030	-		

*Measured under pulse condition. Pulse width= 300 μs , Duty Cycle $\leq 2\%$

Characteristics Curve

