

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

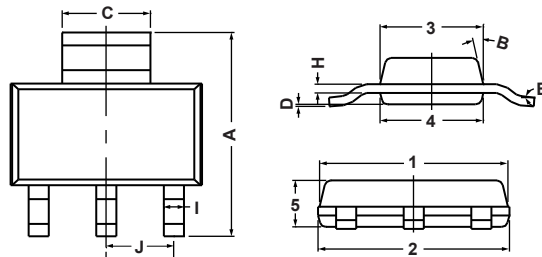
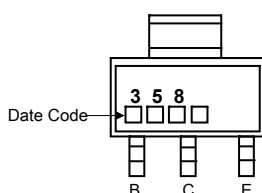
SOT-223

Description

The PZT358 is designed for general purpose switching and amplifier applications.

Features

- * 6Amps Continuous Current, Up To 10Amps 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* ($T_{amb}=25^{\circ}\text{C}$, unless otherwise specified)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current (DC)	6	A
	Collector Current (Pulse)	10	
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	Uni	Test Conditions
Collector-Base Breakdown Voltage	BV_{CBO}	200	-	-	V	$I_C = 100\mu\text{A}, I_E = 0$
Collector-Emitter Breakdown Voltage	$*BV_{CEO}$	100	-	-	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}	-	-	10	nA	$V_{CB} = 150\text{V}, I_E = 0$
Collector-Base Cutoff Current	I_{CES}	-	-	50	nA	$V_{CES} = 100\text{V}$
Emitter-Base Cutoff Current	I_{EBO}	-	-	10	nA	$V_{EB} = 6\text{V}, I_C = 0$
Collector Saturation Voltage	$*V_{CE(sat)1}$	-	-	50	mV	$I_C = 100\text{mA}, I_B = 5\text{mA}$
	$*V_{CE(sat)2}$	-	-	150		$I_C = 2\text{A}, I_B = 100\text{mA}$
	$*V_{CE(sat)3}$	-	-	340		$I_C = 5\text{A}, I_B = 500\text{mA}$
Base Saturation Voltage	$*V_{BE(sat)}$	-	-	1.25	V	$I_C = 5\text{A}, I_B = 500\text{mA}$
Base-Emitter Voltage	$*V_{BE(on)}$	-	-	1.1	V	$V_{CE} = 2\text{V}, I_C = 5\text{A}$
DC Current Gain	$*h_{FE1}$	100	-	-		$V_{CE} = 2\text{V}, I_C = 10\text{mA}$
	$*h_{FE2}$	100	200	300		$V_{CE} = 2\text{V}, I_C = 2\text{A}$
	$*h_{FE3}$	50	-	-		$V_{CE} = 2\text{V}, I_C = 4\text{A}$
	$*h_{FE4}$	20	-	-		$V_{CE} = 2\text{V}, I_C = 10\text{A}$
Gain-Bandwidth Product	f_T	-	130	-	MHz	$V_{CE} = 10\text{V}, I_C = 100\text{mA}, f = 50\text{MHz}$
Output Capacitance	C_{ob}	-	35	-	pF	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$
On-Time	T_{on}	-	55	-	nS	$V_{CC} = 10\text{V}, I_C = 1\text{A}, I_{B1} = I_{B2} = 100\text{mA}$
Off-Time	T_{off}	-	1650	-		

*Measured under pulse condition. Pulse width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

Spice parameter data is available upon request for this device.

CHARACTERISTIC CURVES

