

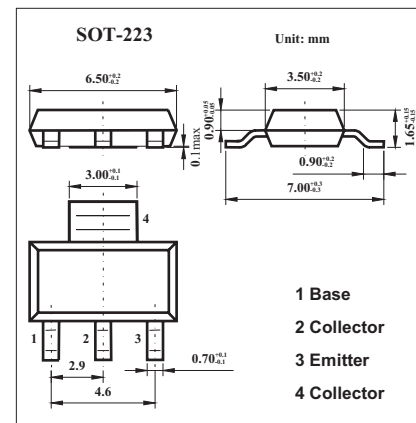
## NPN Silicon Planar High Voltage Transistor

## FZT458

## Features

Collector-emitter voltage:  $V_{CE0}$  400VCollector current-continuous:  $I_C=300\text{mA}$ 

Complementary to FZT558

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	400	V
Collector-Emitter Voltage	$V_{CEO}$	400	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Continuous Collector Current	$I_C$	300	mA
Peak Pulse Current	$I_{CM}$	1	A
Base Current	$I_B$	200	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$	$P_{tot}$	2	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^\circ\text{C}$

## FZT458

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Max	Unit
Breakdown Voltages	$V_{(BR)CBO}$	$I_C=100\mu A$	400		V
Breakdown Voltages	$V_{CEO(sus)}$	$I_C=10mA^*$	400		V
Breakdown Voltages	$V_{(BR)EBO}$	$I_E=100\mu A$	5		V
Collector Cut-Off Currents	$I_{CBO}$	$V_{CB}=320V$		100	nA
	$I_{CES}$	$V_{CE}=320V$		100	nA
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=4V$		100	nA
Emitter Saturation Voltages	$V_{CE(sat)}$	$I_C=20mA, I_B=2mA^*$		0.2	V
		$I_C=50mA, I_B=6mA^*$		0.5	V
	$V_{BE(sat)}$	$I_C=50mA, I_B=5mA^*$		0.9	V
Base-Emitter Turn On Voltage	$V_{BE(on)}$	$I_C=50mA, V_{CE}=10V^*$		0.9	V
Static Forward Current Transfer Ratio	$h_{FE}$	$I_C=1mA, V_{CE}=10V$	100		
		$I_C=50mA, V_{CE}=10V^*$	100	300	
		$I_C=100mA, V_{CE}=10V^*$	15		
Transition Frequency	$f_T$	$I_C=10mA, V_{CE}=20V, f=20MHz$			MHz
Collector-Base Breakdown Voltage	$C_{obo}$	$V_{CB}=20V, f=1MHz$		5	pF
Switching times	$t_{on}$	$I_C=50mA, V_{CC}=100V$	135 Typical		ns
	$t_{off}$	$I_{B1}=5mA, I_{B2}=-10mA$	2260 Typical		ns

\* Measured under pulsed conditions. Pulse width=300 $\mu$ s. Duty cycle  $\leq$  2%