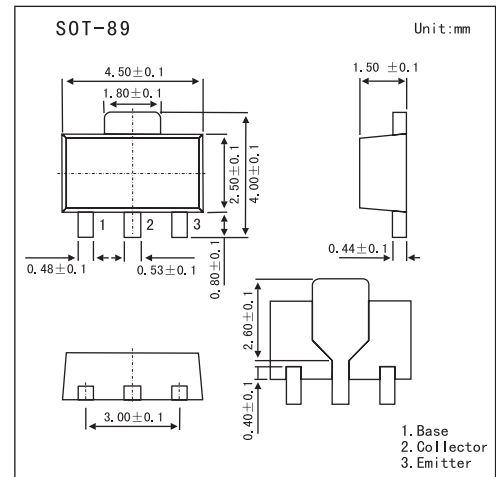


## NPN Silicon Planar High Voltage Transistor

## FCX458

## ■ Features

- 400 Volt  $V_{CE0}$
- $P_{tot}$  = 1 Watt

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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	400	V
Collector-Emitter Voltage	$V_{CE0}$	400	V
Emitter-Base Voltage	$V_{EB0}$	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	$^\circ\text{C}$

## FCX458

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Max	Unit
Breakdown Voltages	V(BR)CBO	Ic=100μA	400		V
Breakdown Voltages	VCEO(sus)	Ic=10mA*	400		V
Breakdown Voltages	V(BR)EBO	IE=100μA	5		V
Collector Cut-Off Currents	ICBO	VCB=320V		100	nA
Collector Cut-Off Currents	ICES	VCE=320V		100	nA
Emitter Cut-Off Current	IEBO	VEB=4V		100	nA
Emitter Saturation Voltages	VCE(sat)	Ic=20mA, IB=2mA*		0.2	V
		Ic=50mA, IB=6mA*		0.5	V
	VBE(sat)	Ic=50mA, IB=5mA*		0.9	V
Base-Emitter Turn On Voltage	VBE(on)	Ic=50mA, VCE=10V*		0.9	V
Static Forward Current Transfer Ratio	hFE	Ic=1mA, VCE=10V	100		
		Ic=50mA, VCE=10V*	100	300	
		Ic=100mA, VCE=10V*	15		
Transition Frequency	fr	Ic=10mA, VCE=20V, f=20MHz	50		MHz
Collector-Base Breakdown Voltage	Cobo	VCB=20V, f=1MHz		5	pF
Switching times	ton	Ic=50mA, VCC=100V	135 Typical		ns
	toff	IB1=5mA, IB2=-10mA	2260 Typical		ns

\* Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤ 2%

## ■ Marking

Marking	N58
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