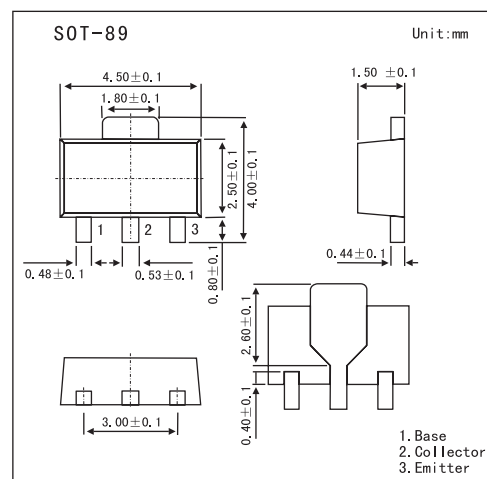


NPN Silicon Planar Medium Power High Voltage Transistor FCX658A

■ Features

- 400 Volt V_{CE0}
- 0.5 Amp continuous current
- $P_{tot}=1$ Watt
- Optimised h_{fe} characterised upto 200mA



■ 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
Peak Pulse Current	I_{CM}	1	A
Continuous Collector Current	I_C	500	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	1	W
derate above 25°C		5.7	mW/ $^\circ\text{C}$
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^\circ\text{C}$

FCX658A

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu A$	400	480		V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA^*$	400	465		V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=100\mu A$	5	7.8		V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=320V$			100	nA
Collector Cut-Off Current	I_{CES}	$V_{CE}=320V$			100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=4V$			100	nA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=20mA, I_B=1mA$			0.165	V
		$I_C=50mA, I_B=5mA^*$			0.125	
		$I_C=100mA, I_B=10mA^*$			0.2	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=10mA^*$		0.75	0.85	V
Base-Emitter Turn On Voltage	$V_{BE(on)}$	$I_C=100mA, V_{CE}=5V^*$		0.70	0.85	V
Static Forward Current Transfer Ratio	h_{FE}	$I_C=1mA, V_{CE}=5V^*$	85	150		
		$I_C=10mA, V_{CE}=10V^*$	100	170		
		$I_C=100mA, V_{CE}=5V^*$	55	130		
		$I_C=200mA, V_{CE}=10V^*$	35	90		
Transition Frequency	f_T	$I_C=20mA, V_{CE}=20V, f=20MHz$	50			MHz
Output Capacitance	C_{obo}	$V_{CB}=20V, f=1MHz$			10	pF
Switching times	t_{on}	$I_C=100mA, V_C=100V$		130		ns
	t_{off}	$I_{B1}=10mA, I_{B2}=-20mA$		3300		ns

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

■ Marking

Marking	65A
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