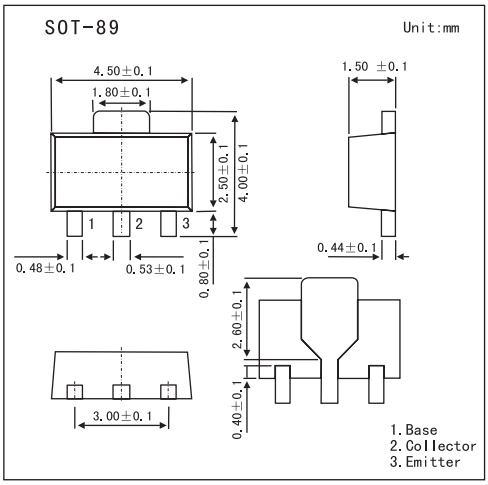
NPN Silicon Planar Medium Power High Voltage Transistor FCX658A



Features

- 400 Volt V_{CEO}
- 0.5 Amp continuous current
- P_{tot}=1 Watt
- Optimised hfe characterised upto 200mA

Absolute Maximum Ratings Ta = 25℃

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℃	P_{tot}	1	W
derate above 25℃		5.7	mW/ ℃
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150	℃

FCX658A

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=100μA	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=100μA	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}	IC=1mA, VCE=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	fT	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