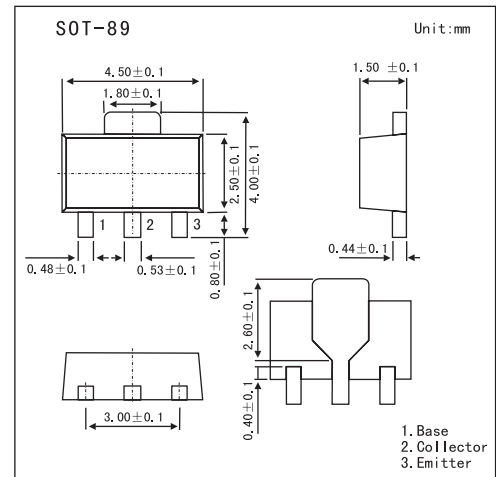


NPN Silicon Planar Medium Power High Voltage Transistor FCX658A

■ 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 =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}	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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