

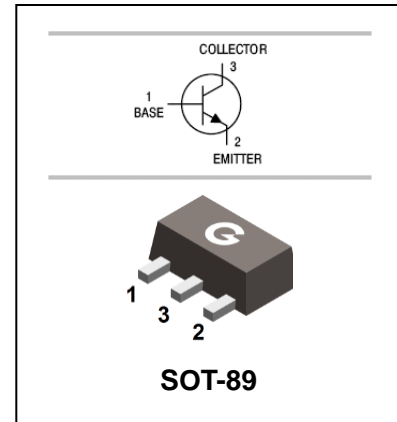
NPN Silicon Planar High Voltage Transistor

FCX495

FEATURES

- $B_{V_{CE0}} > 150V$
- $I_C = 1A$ high Continuous Current
- Low saturation voltage $V_{CE(sat)} < 300mV @ 0.5A$

HF



ORDERING INFORMATION

Type No.	Marking	Package Code
FCX495	N95	SOT-89

MAXIMUM RATING @ $T_a=25^{\circ}C$ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	170	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	7	V
I_{CM}	Peak Pulse Current	2	A
I_C	Collector Current -Continuous	1	A
I_B	Base Current	200	mA
P_D	Power Dissipation	1	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient Air(Note 1)	125	$^{\circ}C/W$
T_j, T_{stg}	Junction and Storage Temperature	-65 to +150	$^{\circ}C$

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	170			V
Collector-emitter breakdown voltage (Note 2)	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	150			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	7			V
Collector cut-off current	I_{CBO}	$V_{CB}=150V$			100	nA
Collector-Emitter Cut-Off Current	I_{CES}	$V_{CES}=150V$			100	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5.6V$			100	nA
DC current gain (Note 2)	h_{FE}	$V_{CE}=10V, I_C=1mA$	100		300	
		$V_{CE}=10V, I_C=250mA$	100			
		$V_{CE}=10V, I_C=500mA$	50			
		$V_{CE}=10V, I_C=1A$	10			
Collector-emitter saturation voltage (Note 2)	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$ $I_C=250mA, I_B=25mA$			0.3 0.2	V
Base-emitter saturation voltage (Note 2)	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$			1.0	V
Base-emitter Turn-on Voltage (Note 2)	$V_{BE(on)}$	$I_C=500mA, V_{CE}=10V$			1.0	V
Transition frequency	f_T	$V_{CE}=10V, I_C=50mA,$ $f=100MHz$	100			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$			10	pF

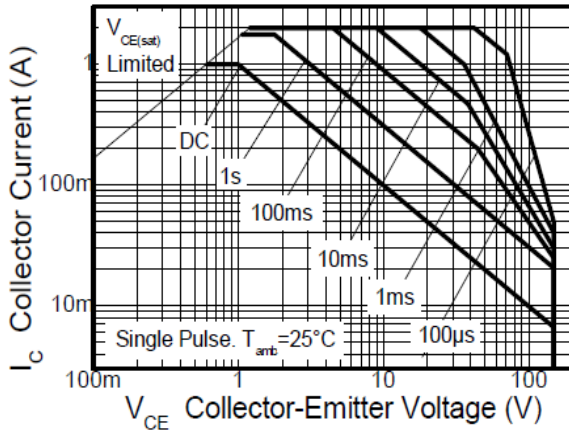
Notes:

- For the device mounted on 15mm x 15mm x 1.6mm FR4 PCB with high coverage of single sided 1oz copper, in still air conditions
- Measured under pulsed conditions. Pulse width $\leq 300\mu s$. Duty cycle $\leq 2\%$

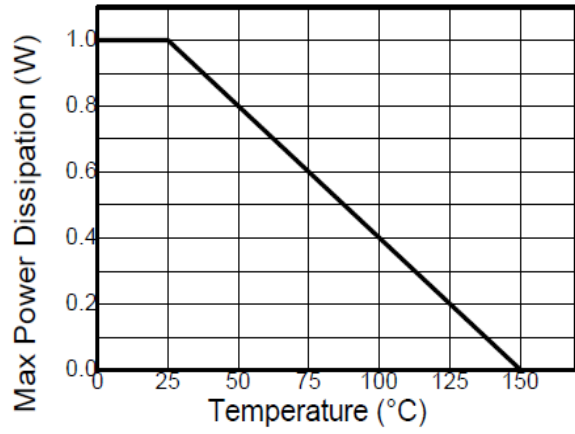
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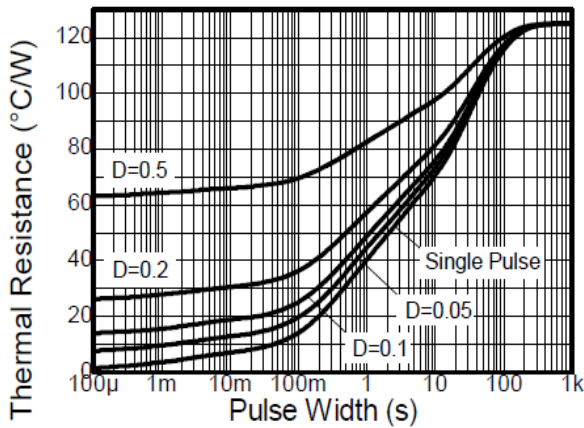
TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



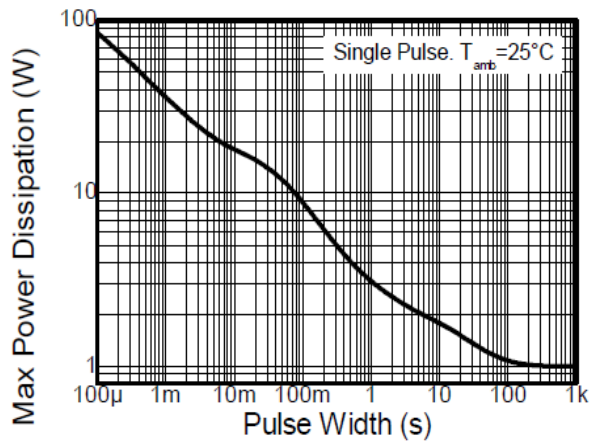
Safe Operating Area



Derating Curve



Transient Thermal Impedance



Pulse Power Dissipation

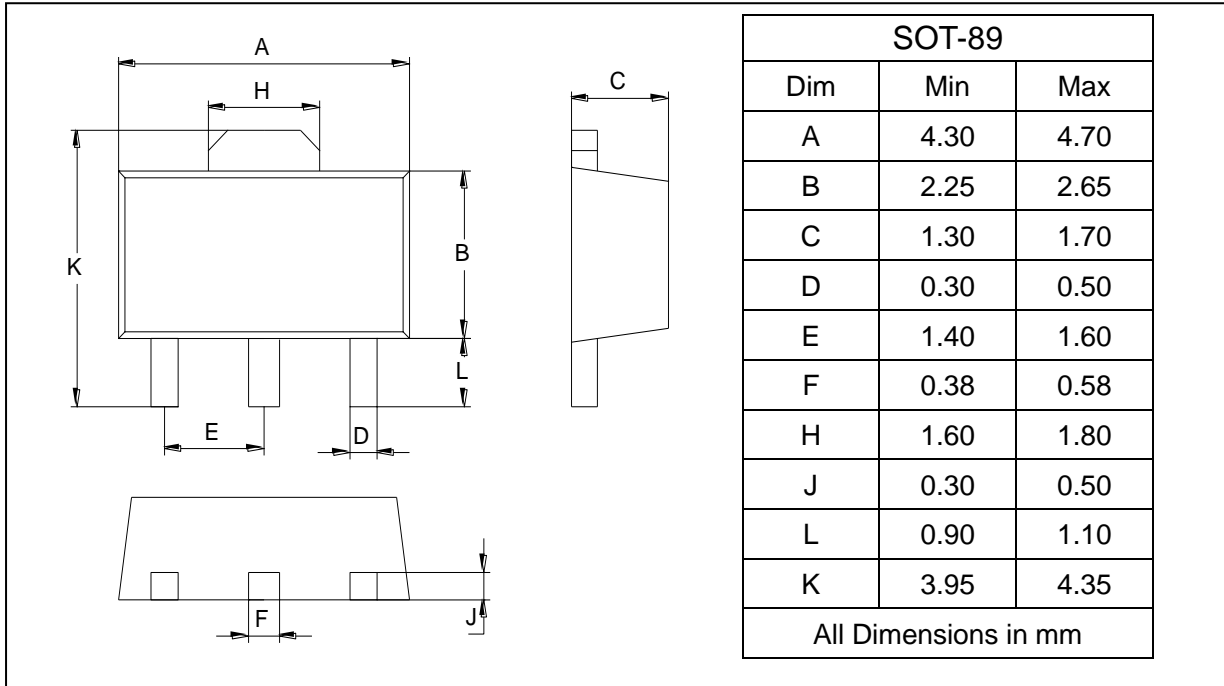
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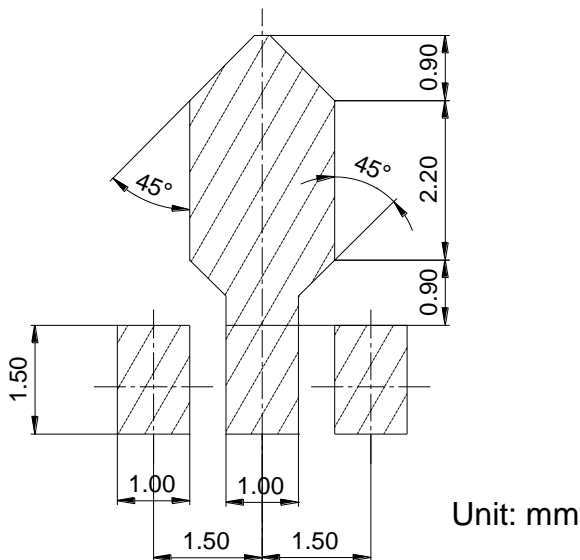
PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
FCX495	SOT-89	1000 pcs / Tape & Reel