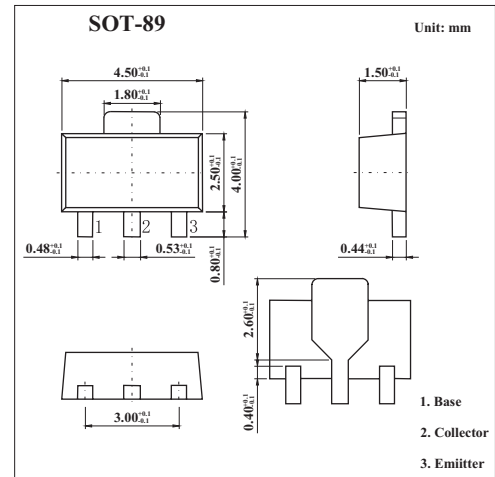


## NPN Silicon Planar Medium Power Transistor KCX491A

### ■ Features

- 60 Volt  $V_{CEO}$ .
- 1 Amp continuous current.
- $P_{tot}$ = 1 Watt.



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	80	V
Collector-emitter voltage	$V_{CEO}$	60	V
Emitter-base voltage	$V_{EBO}$	5	V
Peak pulse current	$I_C$	1	A
Continuous collector current	$I_{CM}$	2	A
Power dissipation	$P_D$	1	W
Operating and storage temperature range	$T_j, T_{stg}$	-65 to +150	$^\circ\text{C}$

### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Breakdown Voltages	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$	80			V
Breakdown Voltages	$V_{CEO(sus)}$	$I_C=10\text{mA}$	60			V
Breakdown Voltages	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$	5			V
Collector-base cut-off current	$I_{CBO}$	$V_{CB}=60\text{V}$			100	nA
	$I_{CES}$	$V_{CE}=60\text{V}$			100	nA
Emitter-base current	$I_{EBO}$	$V_{EB}=4\text{V}$			100	nA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$ $I_C=1\text{A}, I_B=100\text{mA}$			0.25 0.5	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C=1\text{A}, I_B=100\text{mA}$			1.1	V
Base-emitter ON voltage *	$V_{BE(on)}$	$I_C=1\text{A}, V_{CE}=5\text{V}$			1.0	V
Static Forward Current Transfer Ratio *	$h_{FE}$	$I_C=1\text{mA}, V_{CE}=5\text{V}$	100			
		$I_C=500\text{mA}, V_{CE}=5\text{V}^*$	100		300	
		$I_C=1\text{A}, V_{CE}=5\text{V}^*$	80			
		$I_C=2\text{A}, V_{CE}=5\text{V}^*$	30			
Output capacitance	$C_{obo}$	$V_{CB}=10\text{V}, f=1\text{MHz}$			10	pF
Transitional frequency	$f_T$	$I_C=50\text{mA}, V_{CE}=10\text{V}, f=100\text{MHz}$	150			MHz

\* Pulse test:  $t_p = 300 \mu\text{s}; d \leq 0.02$ .