

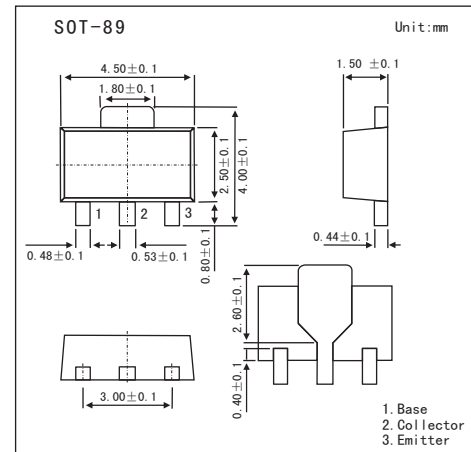
Epitaxial Planar NPN Transistor

KTC4377

Features

Collector Power Dissipation: $P_c=500\text{mW}$

Collector Current: $I_c=2\text{A}$



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	30	V
Collector-Emitter voltage	V_{CEO}	10	V
Emitter-base voltage	V_{EBO}	6	V
Collector Current	I_c	2	A
Collector Power Dissipation	P_c	500	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	$^\circ\text{C}$

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

Parameter	Symbol	Test conditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_c=1\text{mA}, I_E=0$	30			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_c=10\text{mA}, I_B=0$	10			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_c=0$	6			V
Collector Cut-off Current	I_{CBO}	$V_{CB}=30\text{V}, I_E=0$			100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=6\text{V}, I_c=0$			100	nA
DC Current Gain	h_{FE}	$V_{CE}=1\text{V}, I_c=500\text{mA}$	140		600	
		$V_{CE}=1\text{V}, I_c=2\text{A}$	70	140		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_c=2\text{A}, I_B=50\text{mA}$			0.5	V
Base-Emitter Voltage	V_{BE}	$V_{CE}=1\text{V}, I_c=2\text{A}$			1.5	V
Transition frequency	f_t	$V_{CE}=1\text{V}, I_c=500\text{mA}$		150		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		27		pF

h_{FE} Classification

Marking	SA	SB	SC	SD
Rank	A	B	C	D
h_{FE}	140 240	200 330	300 450	420 600