

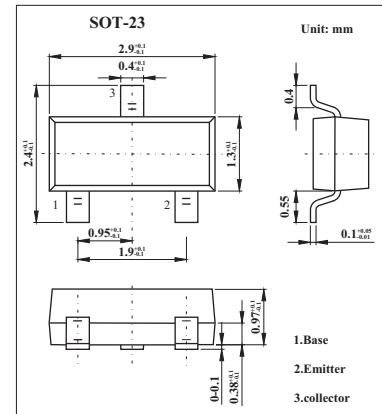
Epitaxial Planar NPN Transistor

KTC3880

Features

Collector Power Dissipation: $P_c=150\text{mW}$

Collector Current: $I_c=20\text{mA}$



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	40	V
Collector-Emitter voltage	V_{CEO}	30	V
Emitter-base voltage	V_{EBO}	4	V
Collector Current	I_c	20	mA
Collector Power Dissipation	P_c	150	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	$V_{(BR)CBO}$	$I_c=100\mu\text{A}, I_E=0$	40			
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_c=1\text{mA}, I_B=0$	30			
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_c=0$	4			
Collector Cut-off Current	I_{CBO}	$V_{CB}=18\text{V}, I_E=0$			0.5	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=4\text{V}, I_c=0$			0.5	μA
DC Current Gain	h_{FE}	$V_{CE}=6\text{V}, I_c=1\text{mA}$	40		200	
Transition Frequency	f_T	$V_{CE}=6\text{V}, I_c=1\text{mA}$		500		MHz
Collector output capacitance	C_{ob}	$V_{CB}=6\text{V}, I_E=0, f=1\text{MHz}$		1		pF
Collector-Base Time Constant	$C_{c,rb}$	$V_{CE}=6\text{V}, I_E=-1\text{mA}, f=30\text{MHz}$			30	ps
Noise Figure	NF	$V_{CE}=6\text{V}, I_c=1\text{mA}, f=100\text{MHz}$			5.0	dB

h_{FE} Classification

Marking	AQR	AQO	AQY
Rank	R	O	Y
h_{FE}	40 80	70 140	100 200