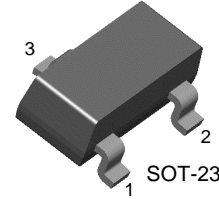


KST5086/5087

Low Noise Transistor



1. Base 2. Emitter 3. Collector

PNP Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-3	V
I_C	Collector Current	-50	mA
P_C	Collector Power Dissipation	350	mW
T_{STG}	Storage Temperature	150	$^\circ\text{C}$

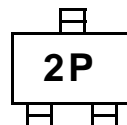
Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = -100\mu\text{A}, I_E = 0$	-50		V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -1\text{mA}, I_B = 0$	-50		V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -20\text{V}, I_E = 0$		-50	nA
h_{FE}	DC Current Gain				
	: KST5086	$V_{CE} = -5\text{V}, I_C = -100\mu\text{A}$	150	500	
	: KST5087		250	800	
	: KST5086	$V_{CE} = -5\text{V}, I_C = -1\text{mA}$	150		
	: KST5087		250		
	: KST5086	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$	150		
	: KST5087		250		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -10\text{mA}, I_B = -1\text{mA}$		-0.3	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -10\text{mA}, I_B = -1\text{mA}$		-0.85	V
f_T	Current Gain Bandwidth Product	$V_{CE} = -5\text{V}, I_C = -500\mu\text{A}$ $f = 20\text{MHz}$	40		MHz
C_{ob}	Output Capacitance	$V_{CB} = -5\text{V}, I_E = 0$ $f = 100\text{MHz}$		4	pF
NF	Noise Figure				
	: KST5086	$I_C = -100\mu\text{A}, V_{CE} = -5\text{V}$ $R_S = 3\text{K}\Omega, f = 1\text{KHz}$		3	dB
	: KST5087			2	dB
	: KST5087	$V_{CE} = -5\text{V}, I_C = -20\text{mA}$ $R_S = 10\text{K}\Omega, f = 10\text{Hz to } 15.7\text{KHz}$		2	dB

Marking Code

Type	KST5086	KST5087
Mark	2P	2Q

Marking



Typical Characteristics

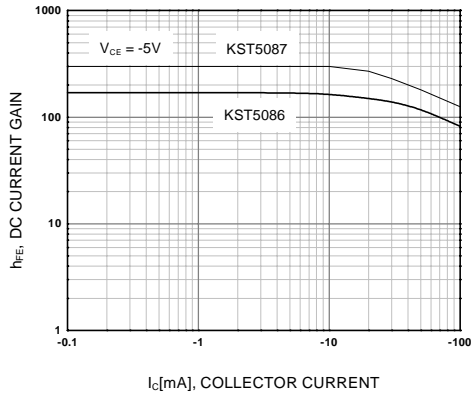


Figure 1. DC current Gain

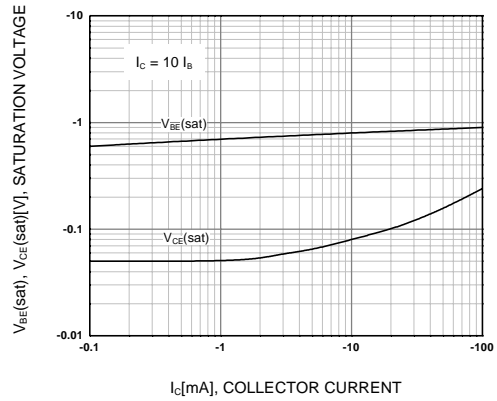


Figure 2. Base-Emitter Saturation Voltage
Collector-Emmitter Saturation Voltage

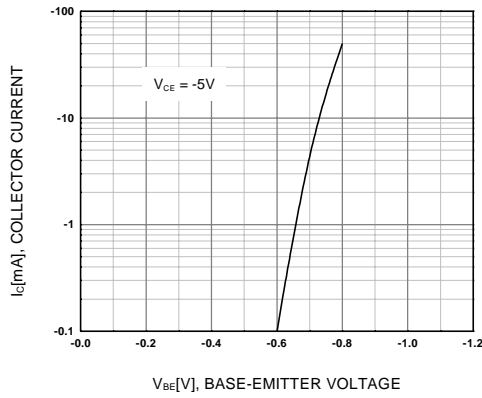


Figure 3. Base-Emitter On Voltage

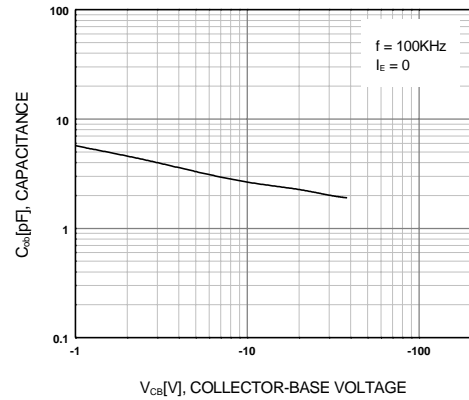


Figure 4. Output Capacitance

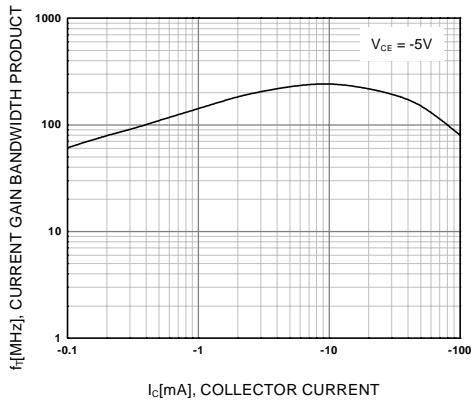
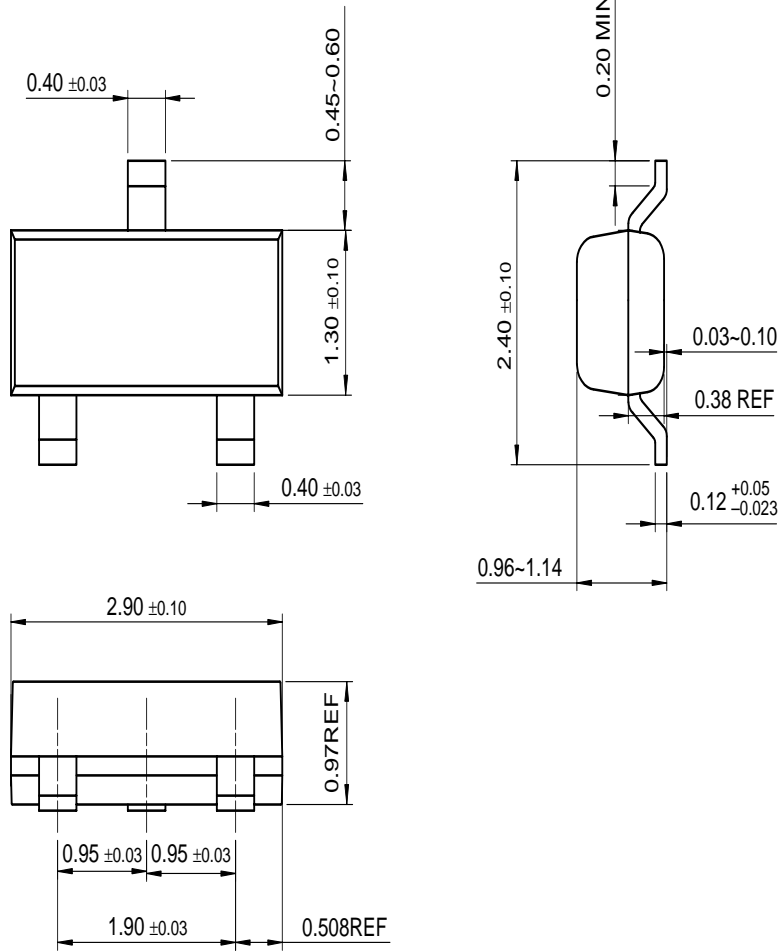


Figure 5. Current Gain Bandwidth Product

Package Dimensions

SOT-23

KST5086/5087



Dimensions in Millimeters

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