

KSA1625

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High Voltage Switch

- High Breakdown Voltage
- High Speed Switching



PNP Silicon Transistor

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

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	-400	V
V_{CEO}	Collector-Emitter Voltage	-400	V
V_{EBO}	Emitter-Base Voltage	-7	V
I_B	Base Current	-0.25	A
I_C	Collector Current (DC)	-0.5	A
I_{CP}	Collector Current (Pulse)	-1.0	A
P_C	Collector Power Dissipation ($T_a=25^\circ\text{C}$)	0.75	W
P_C	Collector Power Dissipation ($T_C=25^\circ\text{C}$)	2	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -1\text{mA}, I_B = 0$	-400		V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -400\text{V}, I_E = 0$		-1	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = -5\text{V}, I_C = 0$		-1	μA
h_{FE}	Dc Current Gain	$V_{CE} = -5\text{V}, I_C = -50\text{mA}$	40	200	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C = -100\text{mA}, I_B = -10\text{mA}$		-1	V
$V_{BE}(\text{sat})$	Base-Emitter Saturation Voltage	$I_C = -100\text{mA}, I_B = -10\text{mA}$		-1.2	V
f_T	Current Gain Bandwidth Product	$V_{CE} = -10\text{V}, I_C = -10\text{mA}$	10		MHz
C_{ob}	Output Capacitance	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		25	pF
t_{ON}	Turn On Time	$I_C = -100\text{mA}, R_L = 1.5\text{k}\Omega$		1	μs
t_{STG}	Storage Time	$I_{B1} = I_{B2} = -10\text{mA}$		5	μs
t_F	Fall Time	$V_{CC} = -150\text{V}$		1	μs

h_{FE} Classification

Classification	M	L	K
h_{FE}	40 ~ 80	60 ~ 120	100 ~ 200

Typical Characteristics

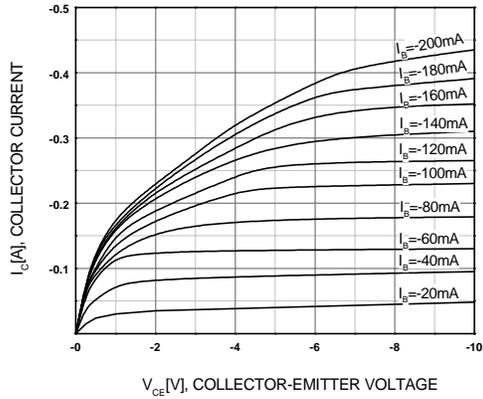


Figure 1. Static Characteristic

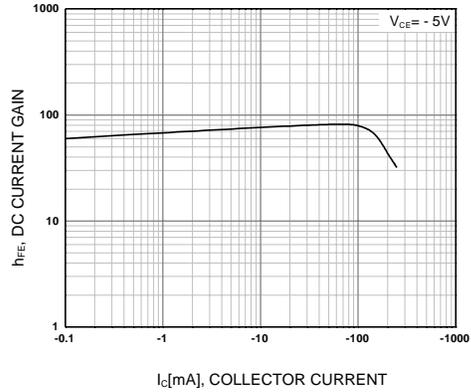


Figure 2. DC current Gain

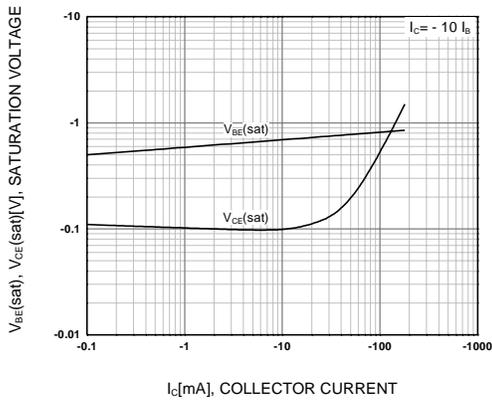


Figure 3. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

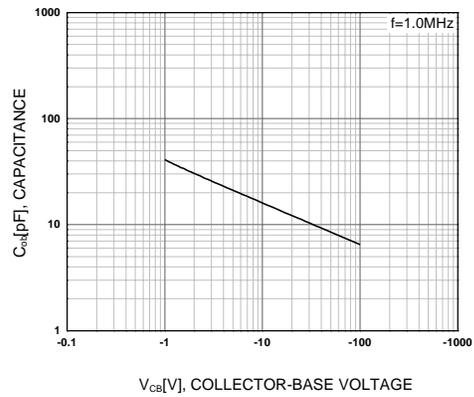


Figure 4. Collector Output Capacitance

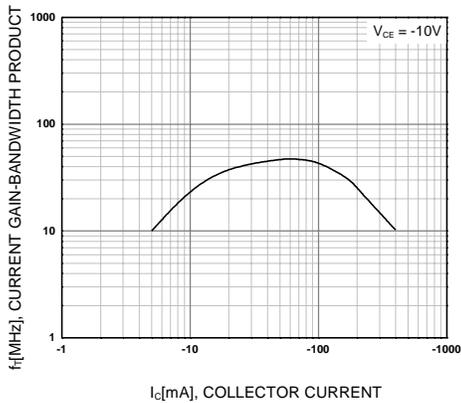


Figure 5. Current Gain Bandwidth Product

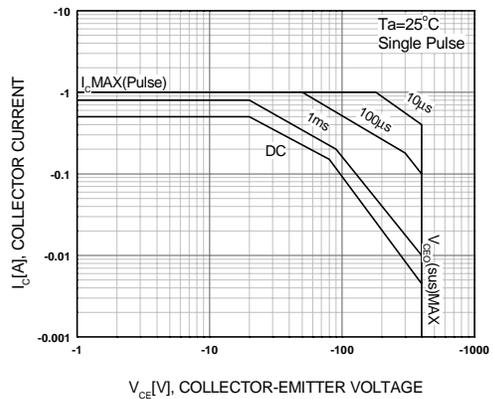
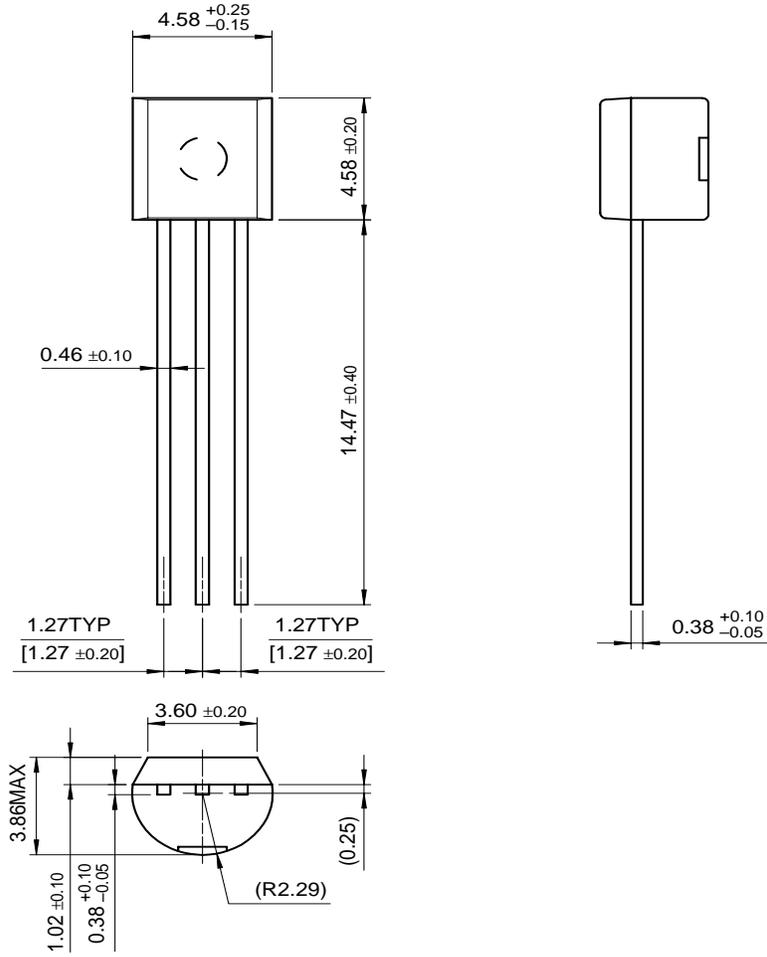


Figure 6. Safe Operating Area

Package Dimensions

TO-92



Dimensions in Millimeters

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