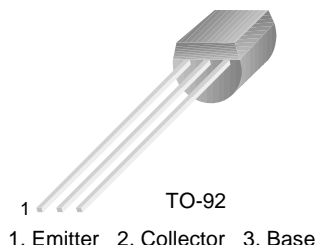


# KSA1625

KSA1625

## 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	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = -5\text{V}, I_C = 0$		-1	$\mu\text{A}$
$h_{FE}$	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	$\mu\text{s}$
$t_{STG}$	Storage Time	$I_{B1} = I_{B2} = -10\text{mA}$		5	$\mu\text{s}$
$t_F$	Fall Time	$V_{CC} = -150\text{V}$		1	$\mu\text{s}$

## $h_{FE}$ Classification

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

# Typical Characteristics

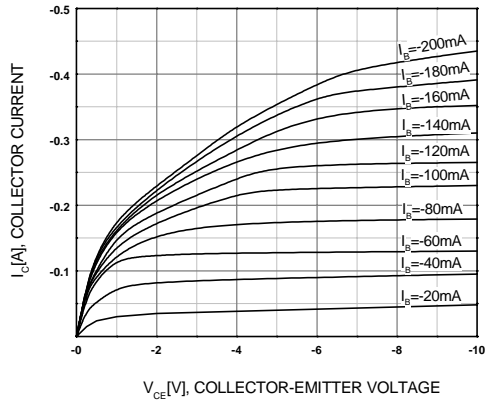


Figure 1. Static Characteristic

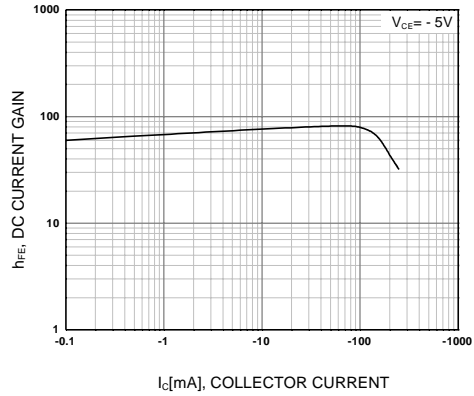


Figure 2. DC current Gain

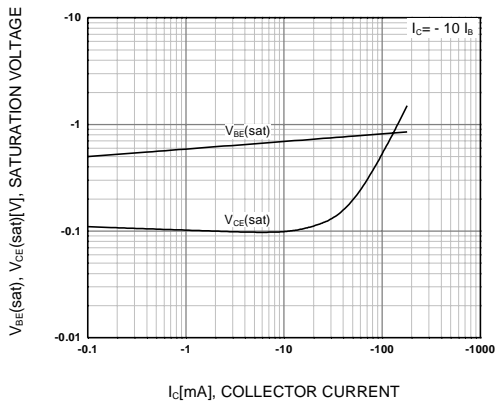


Figure 3. Collector-Emitter Saturation Voltage  
Base-Emitter Saturation Voltage

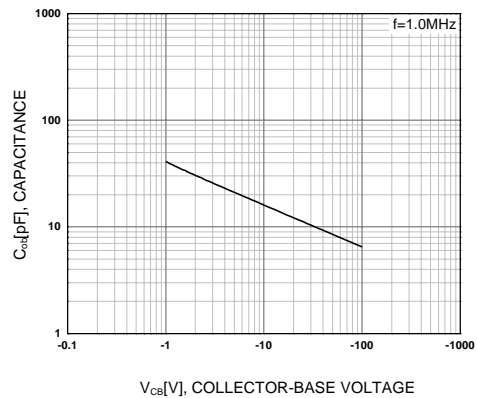


Figure 4. Collector Output Capacitance

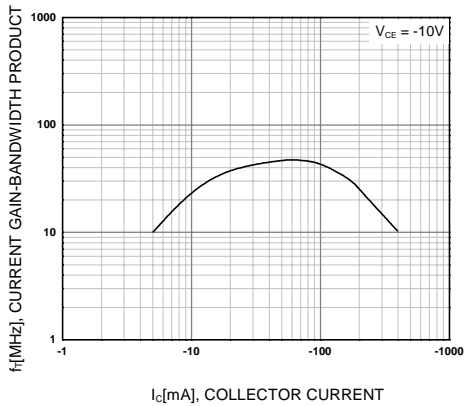


Figure 5. Current Gain Bandwidth Product

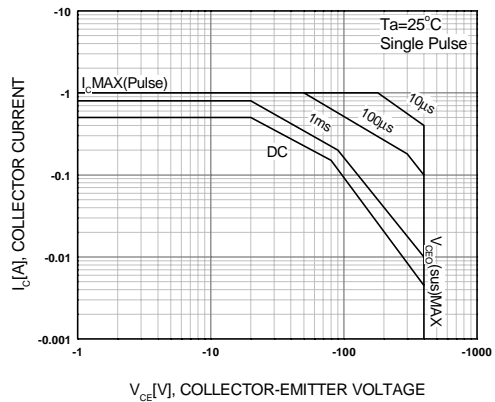


Figure 6. Safe Operating Area

# Package Dimensions

## TO-92



Dimensions in Millimeters

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CoolFET™	GlobalOptoisolator™	PACMAN™	Stealth™	
CROSSVOLT™	GTO™	POP™	SuperSOT™-3	
DOME™	HiSeC™	Power247™	SuperSOT™-6	
EcoSPARK™	I <sup>2</sup> C™	PowerTrench®	SuperSOT™-8	
E <sup>2</sup> CMOS™	ISOPLANAR™	QFET™	SyncFET™	
EnSigna™	LittleFET™	QS™	TinyLogic™	
FACT™	MicroFET™	QT Optoelectronics™	TruTranslation™	
FACT Quiet series™	MicroPak™	Quiet Series™	UHC™	
FAST®	MICROWIRE™	SLIENT SWITCHER®	UltraFET®	

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