

# KSA1015

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## LOW FREQUENCY AMPLIFIER

- Collector-Base Voltage :  $V_{CBO} = -50V$
- Complement to KSC1815



## PNP Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_a = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Ratings	Units
$V_{CBO}$	Collector-Base Voltage	-50	V
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current	-150	mA
$I_B$	Base Current	-50	mA
$P_C$	Collector Dissipation	400	mW
$T_J$	Junction Temperature	125	$^\circ C$
$T_{ST9}$	Storage Temperature	-65 ~ 150	$^\circ C$

### Electrical Characteristics $T_a = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = -100\mu A, I_E = 0$	-50			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10mA, I_B = 0$	-50			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\mu A, I_C = 0$	-5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = -50V, I_E = 0$			-0.1	$\mu A$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = -5V, I_C = 0$			-0.1	$\mu A$
$h_{FE1}$ $h_{FE2}$	DC Current Gain	$V_{CE} = -6V, I_C = -2mA$ $V_{CE} = -6V, I_C = -150mA$	70 25		400	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -100mA, I_B = -10mA$		-0.1	-0.3	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -100mA, I_B = -10mA$			-1.1	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = -10V, I_C = -1mA$	80			MHz
$C_{ob}$	Output Capacitance	$V_{CB} = -10V, I_E = 0, f = 1MHz$		4	7	pF
NF	Noise Figure	$V_{CE} = -6V, I_C = -0.1mA$ $f = 100Hz, R_G = 10k\Omega$		0.5	6	dB

### $h_{FE1}$ Classification

Classification	O	Y	G
$h_{FE}$	70 ~ 140	120 ~ 240	200 ~ 400

# Typical Characteristics

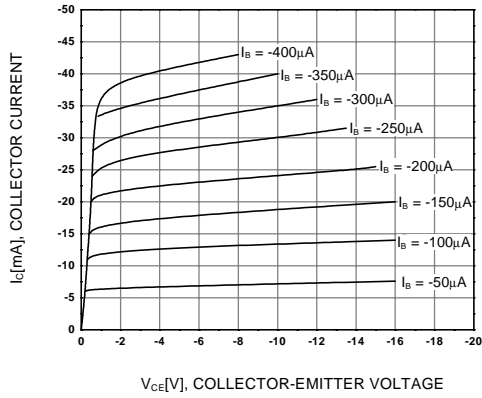


Figure 1. Static Characteristic

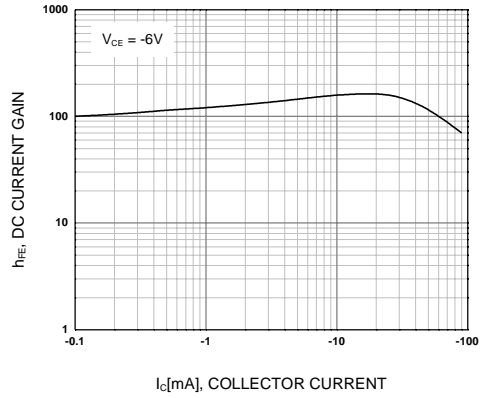


Figure 2. DC current Gain

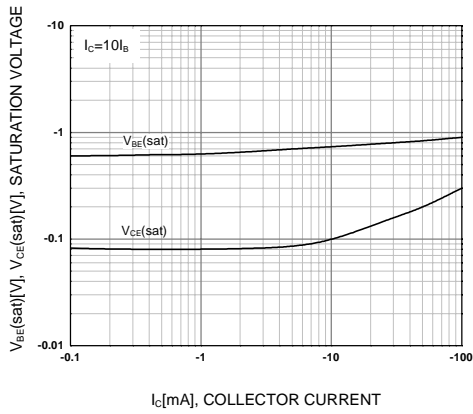


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

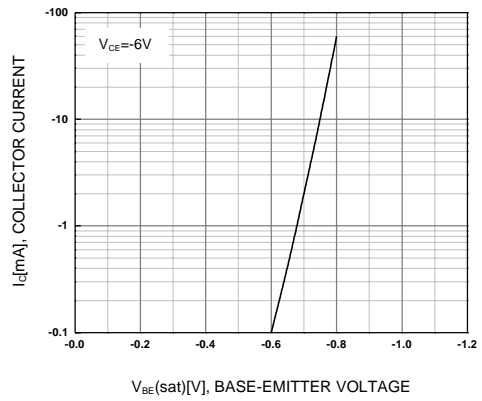


Figure 4. Base-Emitter On Voltage

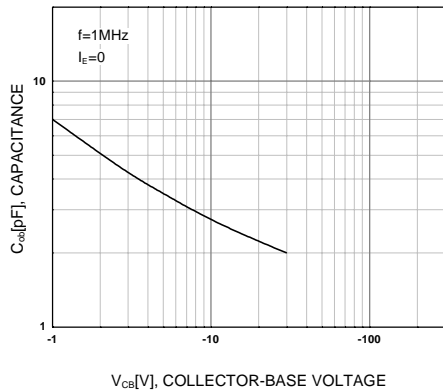


Figure 5. Collector Output Capacitance

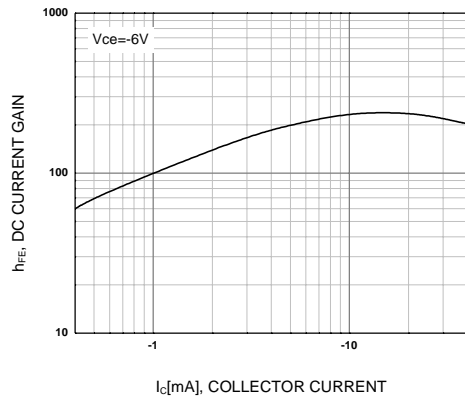


Figure 6. Current Gain Bandwidth Product

# Package Dimensions

KSA1015

## TO-92



Dimensions in Millimeters

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