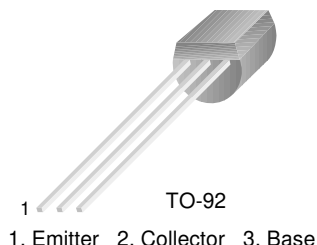


# KSC1815

KSC1815

## Audio Frequency Amplifier & High Frequency OSC

- Complement to KSA1015
- Collector-Base Voltage :  $V_{CBO} = 50V$



## NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	60	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 Power Dissipation	400	mW
$T_J$	Junction Temperature	125	$^\circ C$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ C$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = 60V, I_E = 0$			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		700	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 100mA, I_B = 10mA$		0.1	0.25	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 100mA, I_B = 10mA$			1.0	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = 10V, I_C = 1mA$	80			MHz
$C_{ob}$	Output Capacitance	$V_{CB} = 10V, I_E = 0, f = 1MHz$		2.0	3.0	pF
NF	Noise Figure	$V_{CE} = 6V, I_C = 0.1mA$ $R_S = 10k\Omega, f = 1Hz$		1.0	1.0	dB

### $h_{FE}$ Classification

Classification	O	Y	GR	L
$h_{FE1}$	70 ~ 140	120 ~ 240	200 ~ 400	350 ~ 700

# Typical Characteristics

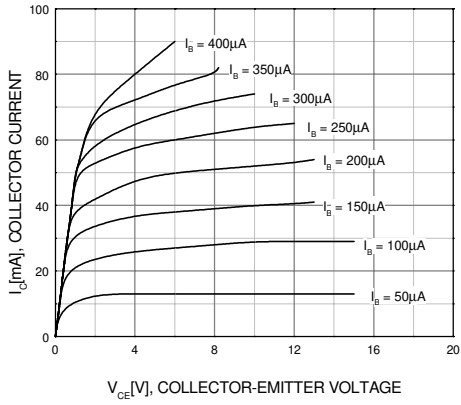


Figure 1. Static Characteristic

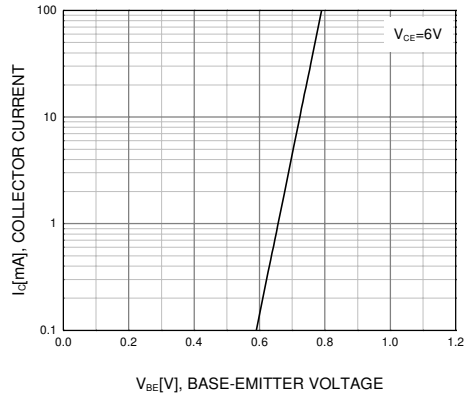


Figure 2. Transfer Characteristic

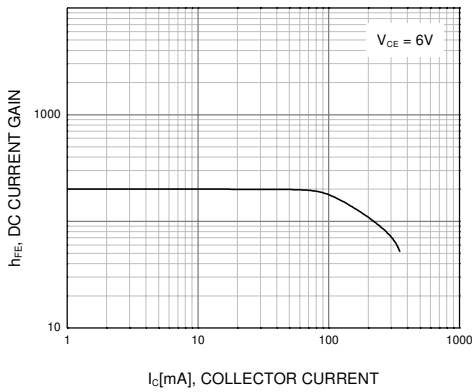


Figure 3. DC current Gain

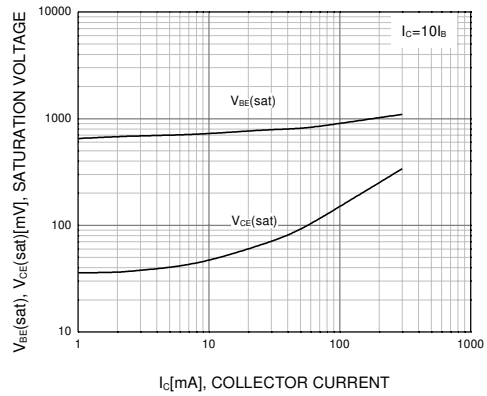


Figure 4. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

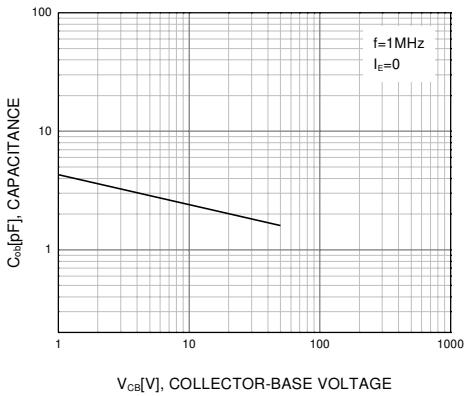


Figure 5. Output Capacitance

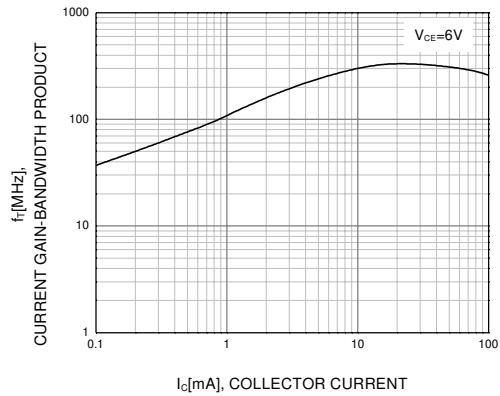
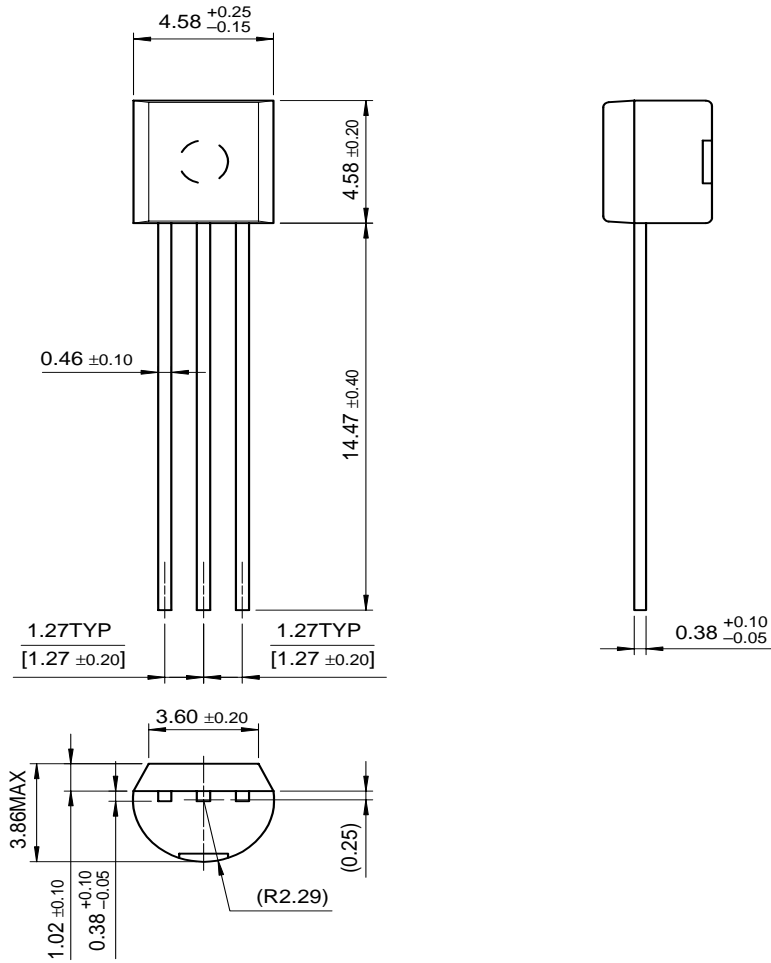


Figure 6. Current Gain Bandwidth Product

# Package Dimensions

KSC1815

## TO-92



Dimensions in Millimeters

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Bottomless <sup>TM</sup>	FAST <sup>®</sup>	LittleFET <sup>TM</sup>	Power247 <sup>TM</sup>	SuperSOT <sup>TM</sup> -3
CoolFET <sup>TM</sup>	FAST <sup>r</sup> <sup>TM</sup>	MicroFET <sup>TM</sup>	PowerTrench <sup>®</sup>	SuperSOT <sup>TM</sup> -6
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