

KSC1815

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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	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 5V, I_C = 0$			0.1	μA
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

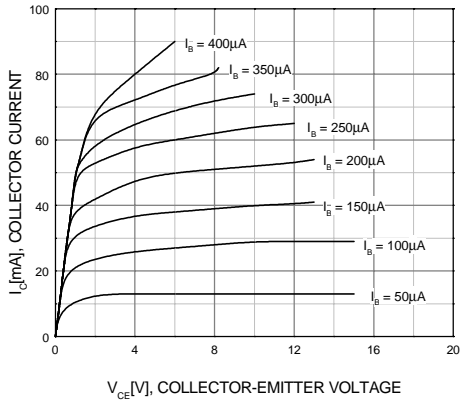


Figure 1. Static Characteristic

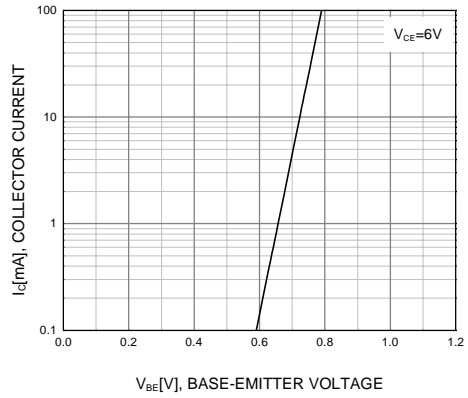


Figure 2. Transfer Characteristic

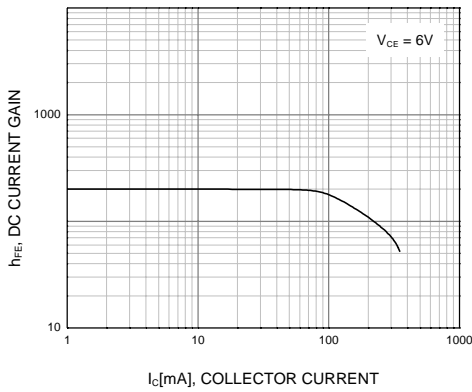


Figure 3. DC current Gain

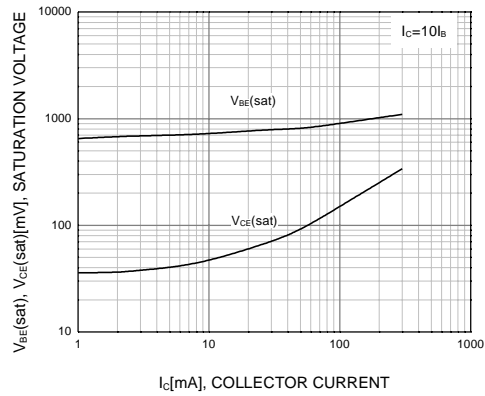


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

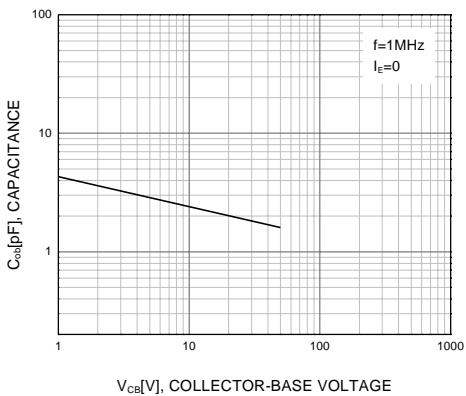


Figure 5. Output Capacitance

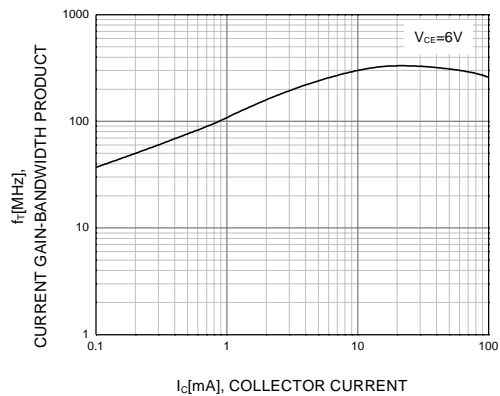


Figure 6. Current Gain Bandwidth Product

Package Dimensions

KSC1815

TO-92



Dimensions in Millimeters

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