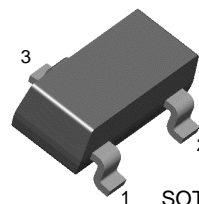


KSC2859

KSC2859

Low Frequency Power Amplifier

- Complement to KSA1182



1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	35	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	150	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

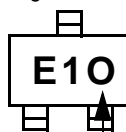
Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CEO}	Collector Cut-off Current	$V_{CB}=35\text{V}, I_E=0$			0.1	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=5\text{V}, I_C=0$			0.1	μA
h_{FE1} h_{FE2}	DC Current Gain	$V_{CE}=1\text{V}, I_C=100\text{mA}$ $V_{CE}=6\text{V}, I_C=400\text{mA}$	70 25		240	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=100\text{mA}, I_B=10\text{mA}$		0.1	0.25	V
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$V_{CE}=1\text{V}, I_C=100\text{mA}$		0.8	1.0	V
f_T	Current Gain-Bandwidth Product	$V_{CE}=6\text{V}, I_C=20\text{mA}$		300		MHz
C_{ob}	Output Capacitance	$V_{CB}=6\text{V}, I_E=0, f=1\text{MHz}$		7		pF

h_{FE1} Classification

Classification	O	Y
h_{FE1}	70 ~ 140	120 ~ 240

Marking



h_{FE} grade

Typical Characteristics

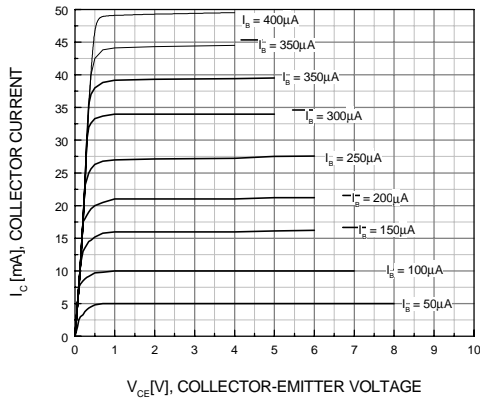


Figure 1. Static Characteristics

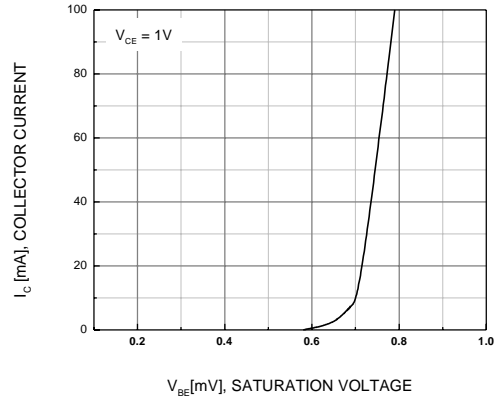


Figure 2. Base-Emitter On Voltage

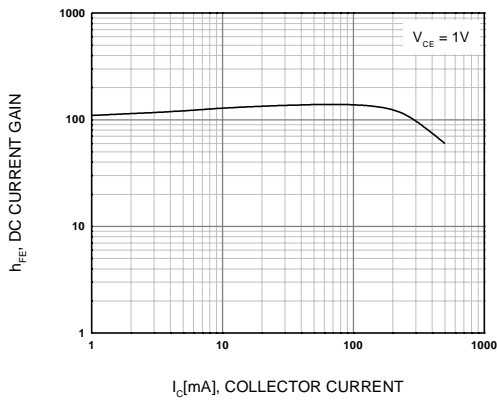


Figure 3. DC Current Gain

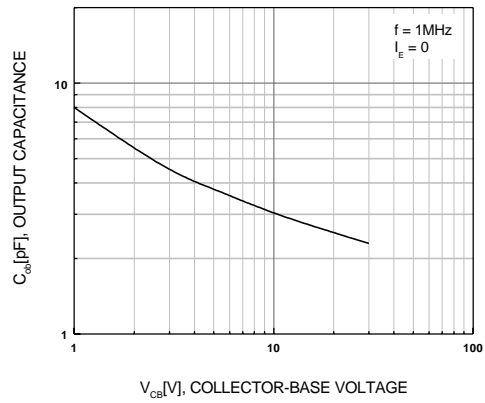


Figure 4. Output Capacitance

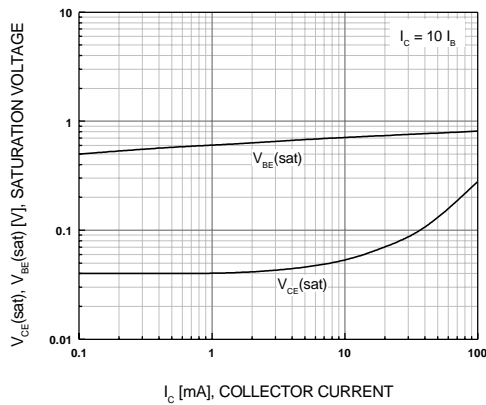
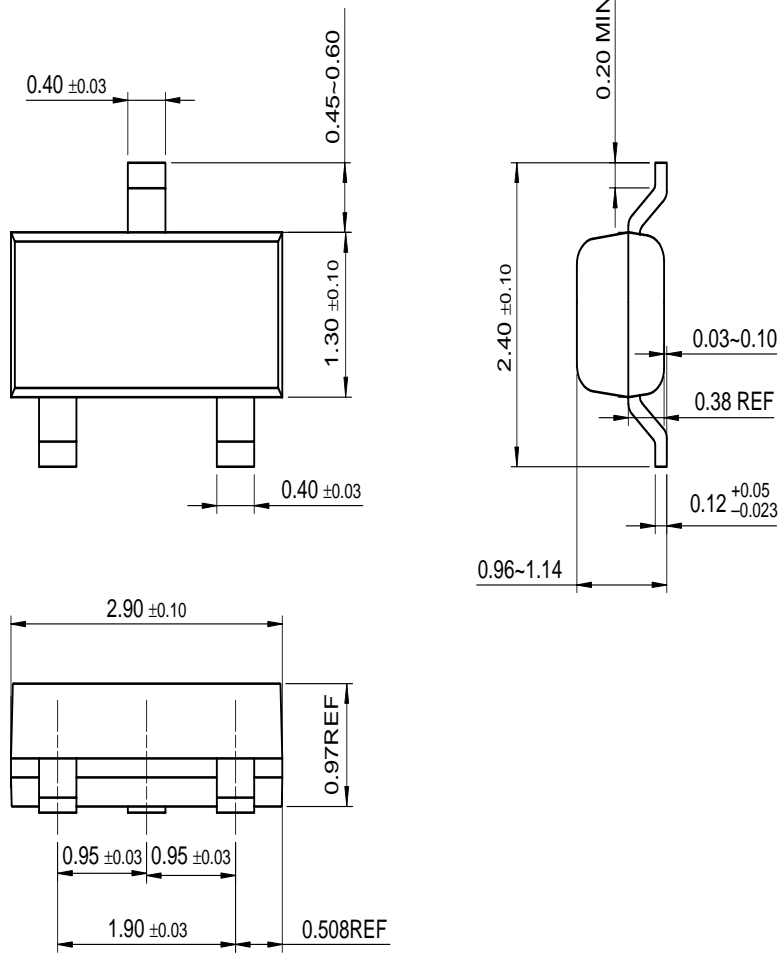


Figure 5. Saturation Voltage

Package Dimensions

SOT-23



Dimensions in Millimeters