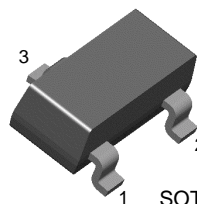


# KSC2715

KSC2715

**FM RADIO AMP, MIX, CONV, OSC, IF AMP**



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	4	V
$I_C$	Collector Current	50	mA
$P_C$	Collector Power Dissipation	150	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

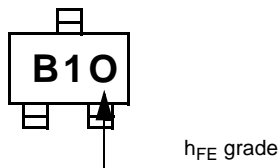
**Electrical Characteristics**  $T_a=25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=35\text{V}, I_E=0$			0.1	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB}=4\text{V}, I_C=0$			1	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$V_{CE}=12\text{V}, I_C=2\text{mA}$	70		240	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=10\text{mA}, I_B=1\text{mA}$			0.4	V
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$I_C=10\text{mA}, I_B=1\text{mA}$			1.0	V
$f_T$	Current Gain Bandwidth Product	$V_{CE}=10\text{V}, I_C=1\text{mA}$	100		400	MHz
$C_{ob}$	Output Capacitance	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		2	3.2	pF

## $h_{FE}$ Classification

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

Marking



# Typical Characteristics

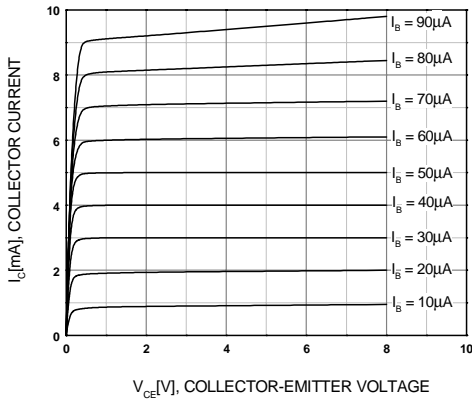


Figure 1. Static Characteristic

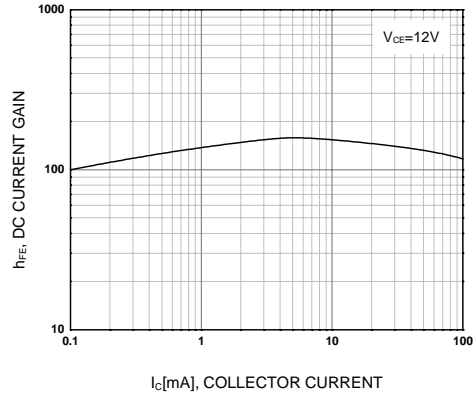


Figure 2. DC current Gain

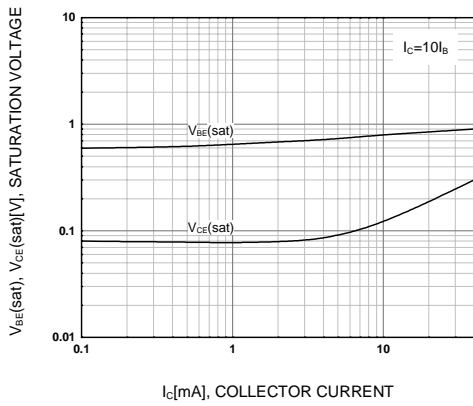


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

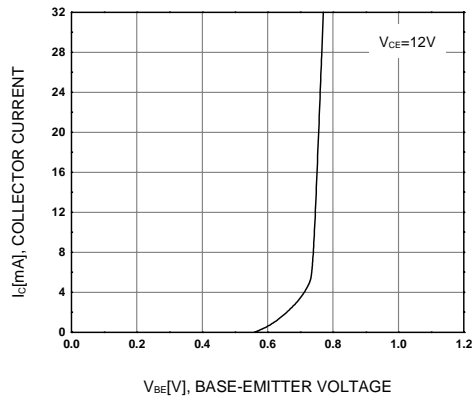


Figure 4. Base-Emitter On Voltage

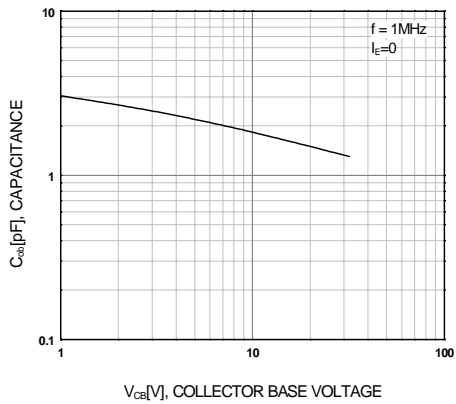


Figure 5. Collector Output Capacitance

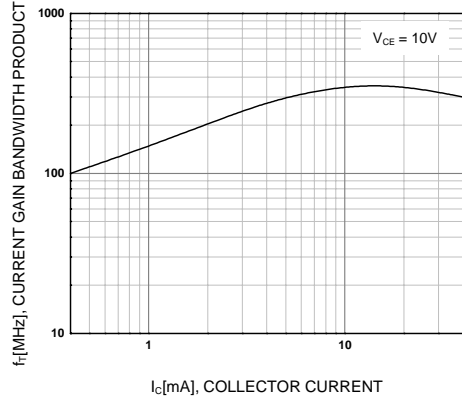
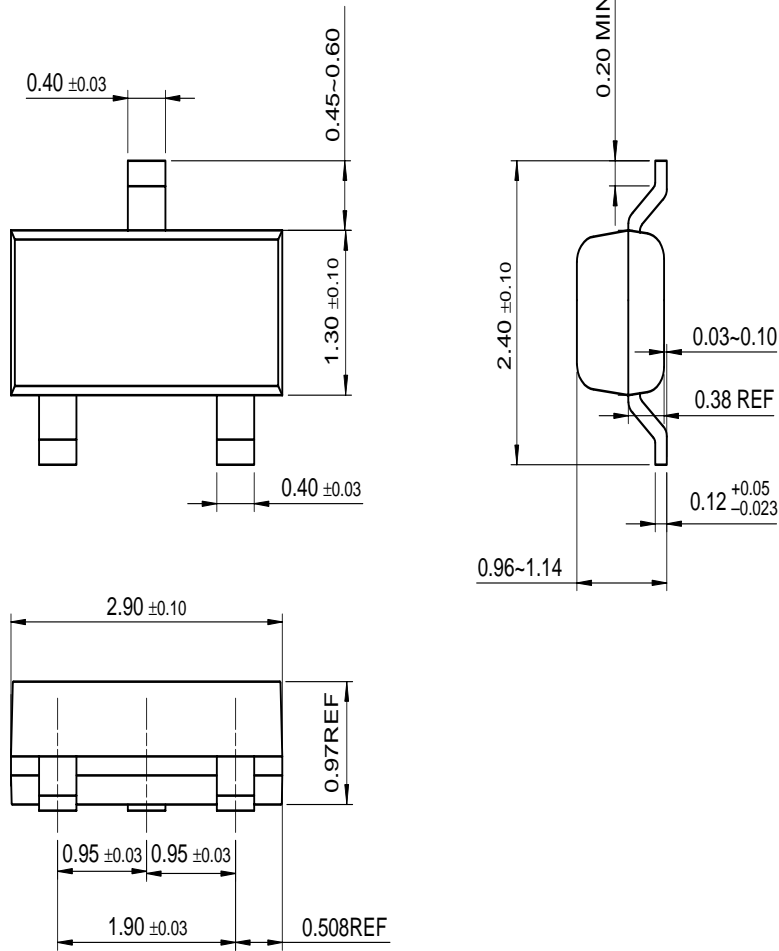


Figure 6. Current Gain Bandwidth Product

# Package Dimensions

## SOT-23



Dimensions in Millimeters

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ActiveArray <sup>™</sup>	FAST <sub>r</sub> <sup>™</sup>	LittleFET <sup>™</sup>	PowerSaver <sup>™</sup>	SuperSOT <sup>™</sup> -3
Bottomless <sup>™</sup>	FPS <sup>™</sup>	MICROCOUPLER <sup>™</sup>	PowerTrench <sup>®</sup>	SuperSOT <sup>™</sup> -6
CoolFET <sup>™</sup>	FRFET <sup>™</sup>	MicroFET <sup>™</sup>	QFET <sup>®</sup>	SuperSOT <sup>™</sup> -8
CROSSVOLT <sup>™</sup>	GlobalOptoisolator <sup>™</sup>	MicroPak <sup>™</sup>	QS <sup>™</sup>	SyncFET <sup>™</sup>
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