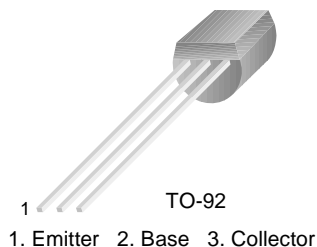


# KSC1675

## FM/AM RF AMP, MIX, CONV, OSC, IF

- Collector-Base Voltage :  $V_{CE0}=30V$
- High Current Gain Bandwidth Product :  $f_T=300MHz$  (TYP.)
- Low Collector Capacitance :  $C_{OB}=2.0pF$  (TYP.)
- Suffix "-C" means Center Collector (1. Emitter 2. Collector 3. Base)



## NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	50	V
$V_{CEO}$	Collector-Emitter Voltage	30	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	50	mA
$P_C$	Collector Power Dissipation	250	mW
$T_J$	Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ C$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C=10\mu A, I_E=0$	50			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C=5mA, I_B=0$	30			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	$\mu A$
$h_{FE}$	DC Current Gain	$V_{CE}=6V, I_C=1mA$	40		240	
$V_{BE}$ (on)	Base-Emitter On Voltage	$V_{CE}=6V, I_C=1mA$		0.67	0.75	V
$V_{CE}$ (sat)	Collector-Emitter Saturation Voltage	$I_C=10mA, I_B=1mA$		0.08	0.3	V
$f_T$	Current Gain Bandwidth Product	$V_{CE}=6V, I_C=1mA$	150	300		MHz
$C_{ob}$	Output Capacitance	$V_{CB}=6V, I_E=0, f=1MHz$		2.0	2.5	pF

### $h_{FE}$ Classification

Classification	R	O	Y
$h_{FE}$	40 ~ 80	70 ~ 140	120 ~ 240

# Typical Characteristics

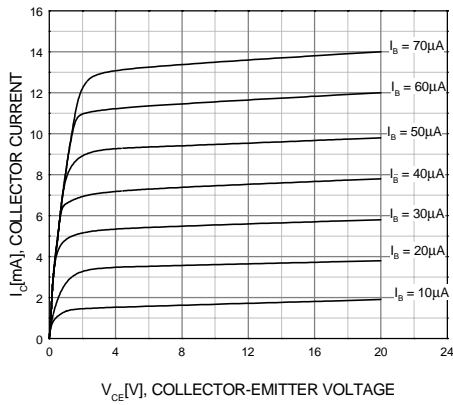


Figure 1. Static Characteristic

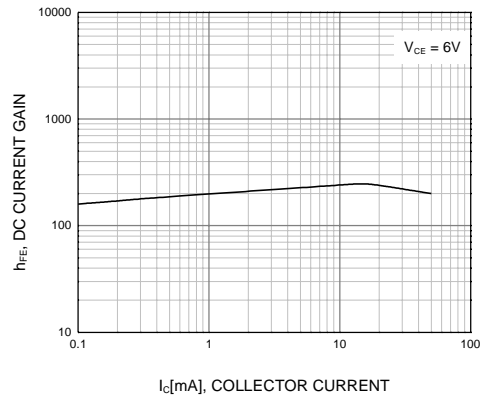


Figure 2. DC current Gain

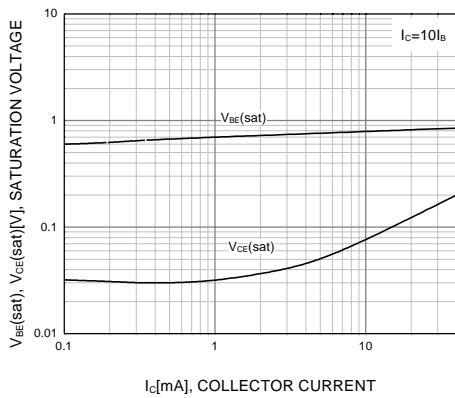


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

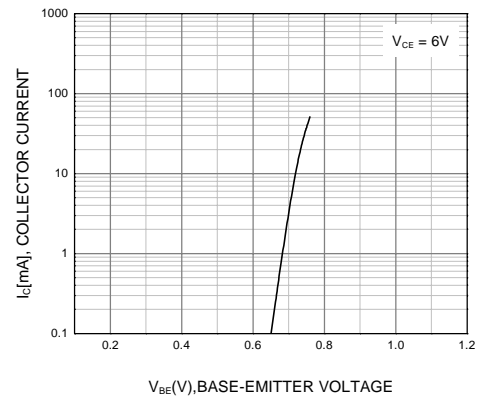


Figure 4. Base-Emitter On Voltage

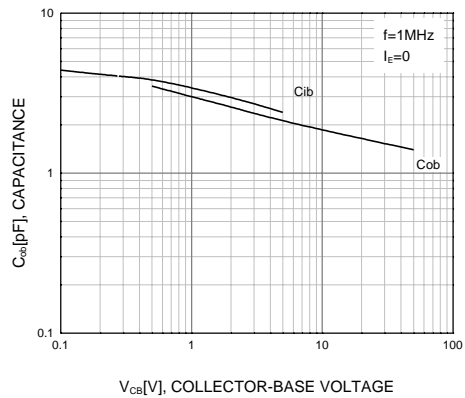


Figure 5. Input Output Capacitance

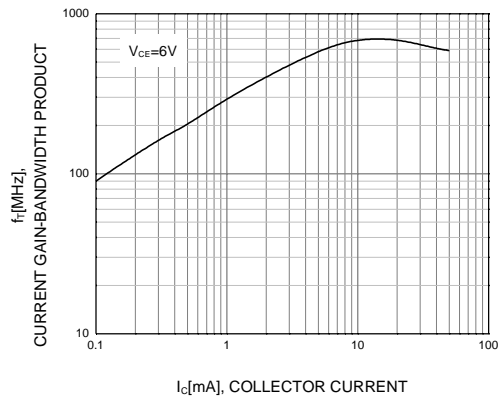


Figure 6. Current Gain Bandwidth Product

# Package Dimensions

## TO-92



Dimensions in Millimeters

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Bottomless <sup>™</sup>	FAST <sup>®</sup>	LittleFET <sup>™</sup>	Power247 <sup>™</sup>	SuperSOT <sup>™</sup> -3
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CROSSVOLT <sup>™</sup>	FRFET <sup>™</sup>	MicroPak <sup>™</sup>	QFET <sup>™</sup>	SuperSOT <sup>™</sup> -8
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EcoSPARK <sup>™</sup>	GTO <sup>™</sup>	MSX <sup>™</sup>	QT Optoelectronics <sup>™</sup>	TinyLogic <sup>™</sup>
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## PRODUCT STATUS DEFINITIONS

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