

KSC1675

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

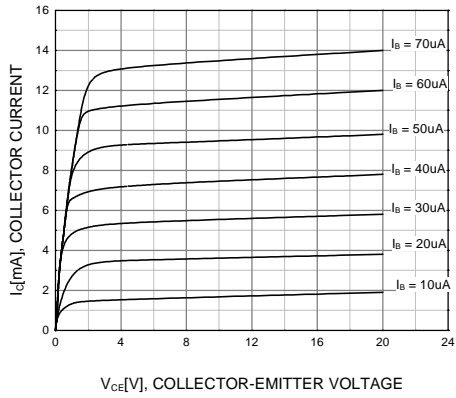


Figure 1. Static Characteristic

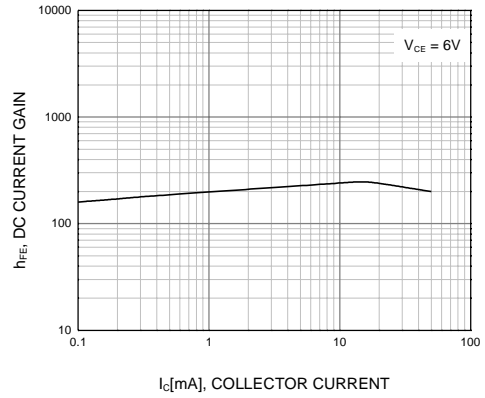


Figure 2. DC current Gain

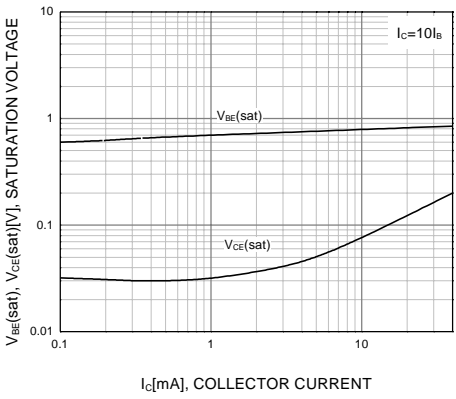


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

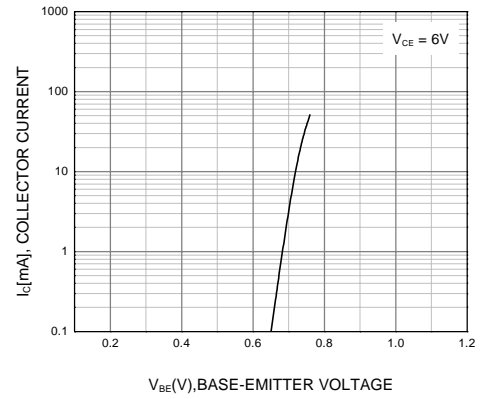


Figure 4. Base-Emitter On Voltage

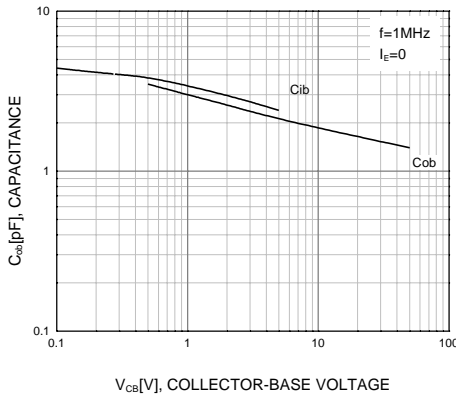


Figure 5. Input Output Capacitance

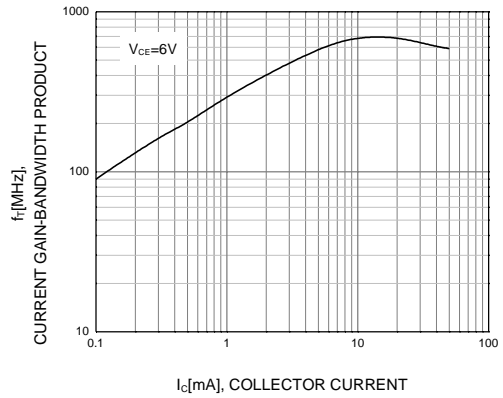
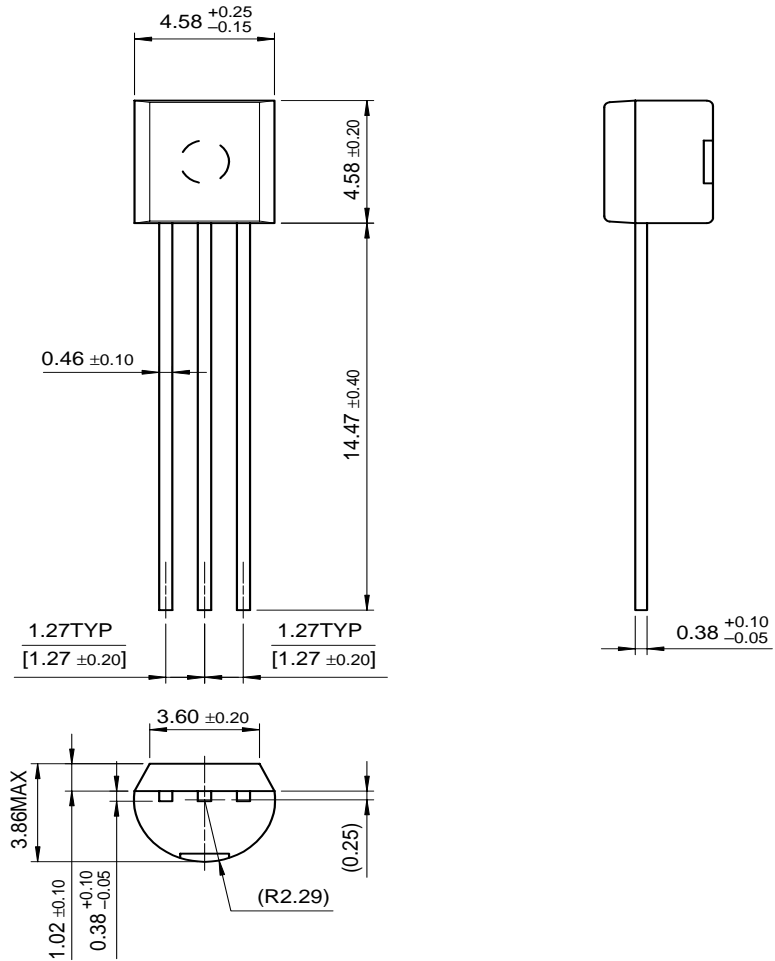


Figure 6. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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Applications

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

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
KSC1675CRBU	Full Production	\$0.05	TO-92	3	BULK
KSC1675YBU	Full Production	\$0.05	TO-92	3	BULK
KSC1675RBU	Full Production	\$0.05	TO-92	3	BULK
KSC1675CYTA	Full Production	\$0.05	TO-92	3	TAPE REEL
KSC1675OTA	Full Production	\$0.05	TO-92	3	TAPE REEL
KSC1675COBU	Full Production	\$0.05	TO-92	3	BULK
KSC1675CYBU	Full Production	\$0.05	TO-92	3	BULK
KSC1675YS1TA	Full Production	\$0.05	TO-92	3	TAPE REEL

KSC1675OBU	Full Production	\$0.05	TO-92	3	BULK
KSC1675YTA	Full Production	\$0.05	TO-92	3	TAPE REEL

* 1,000 piece Budgetary Pricing

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