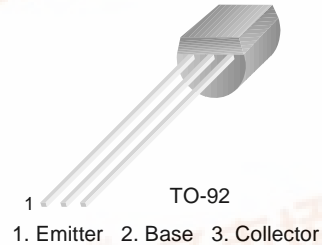


FAIRCHILD
SEMICONDUCTOR®

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	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

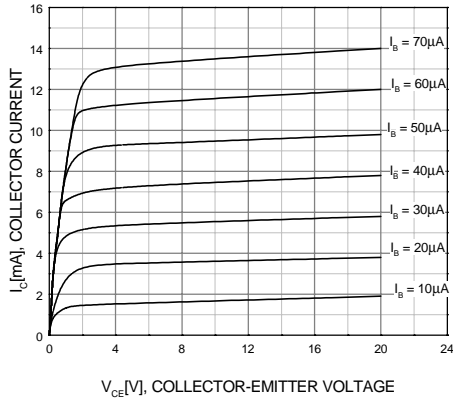


Figure 1. Static Characteristic

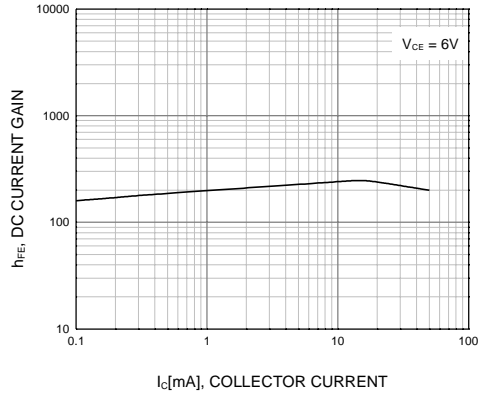


Figure 2. DC current Gain

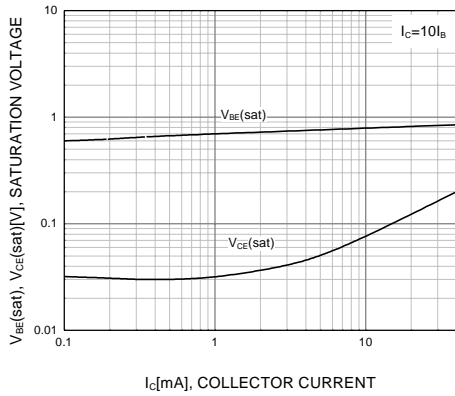


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

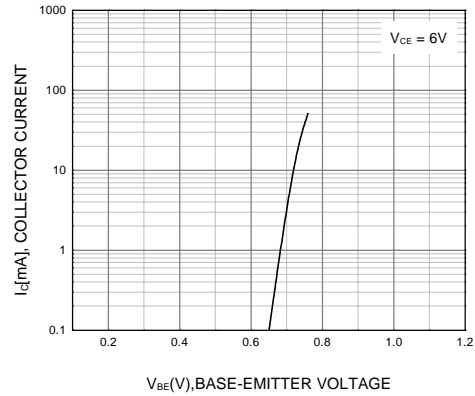


Figure 4. Base-Emitter On Voltage

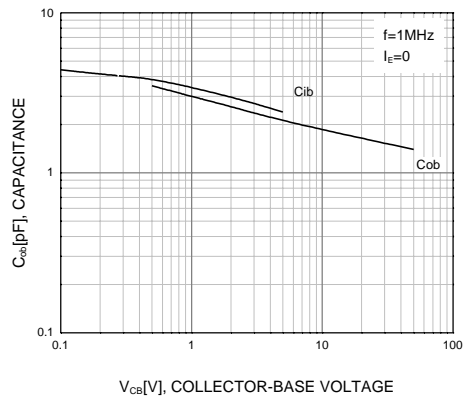


Figure 5. Input Output Capacitance

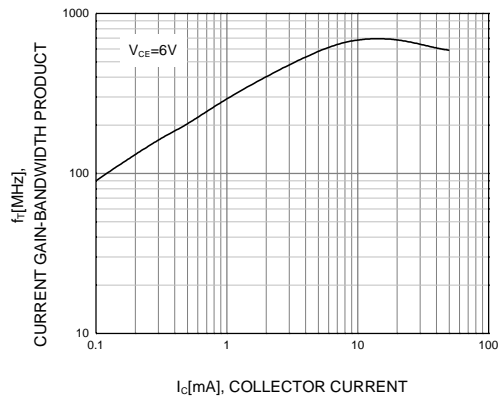
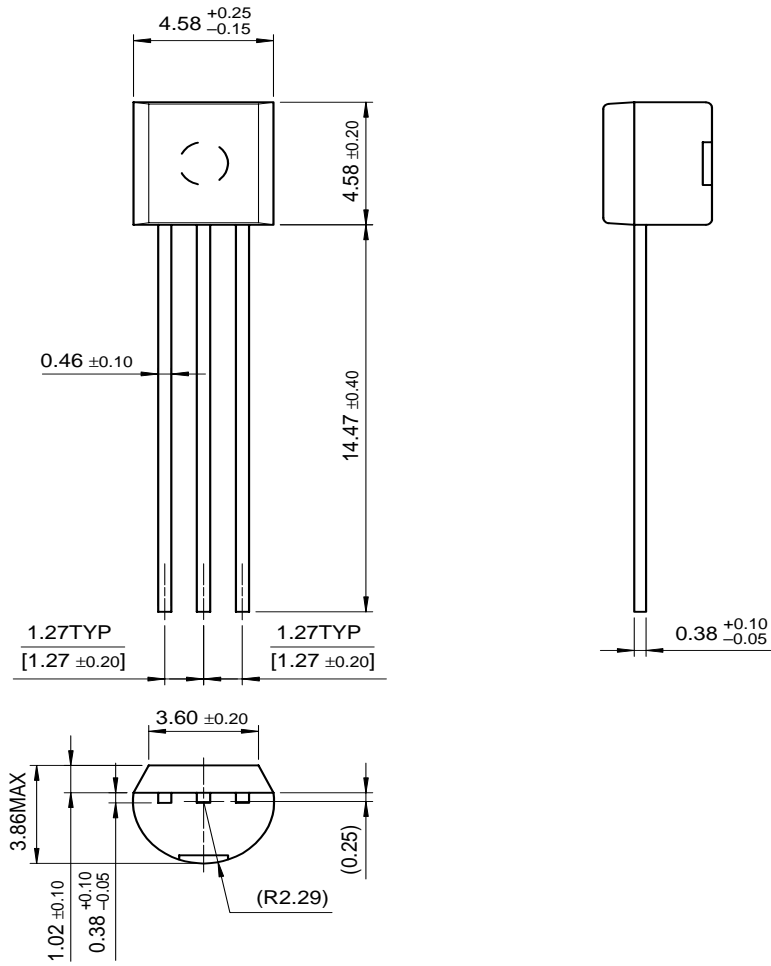


Figure 6. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOMET™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E ² CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I ² C™	OCX™	RapidConfigure™	UHC™
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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