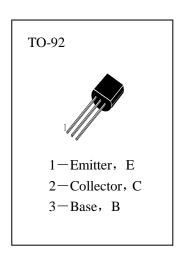
## K I SEMICONDUCTOR

C1815

# AUDIO FREQUENCY AMPLIFIER HIGH FREQUENCY OSC

### **ABSOLUTE MAXIMUM RATINGS** $(T_a=25^{\circ}C)$

$T_{stg}$ —Storage Temperature -55~150°C
$T_j \text{Junction Temperature} \cdots 150 ^{\circ}\text{C}$
P <sub>C</sub> ——Collector Dissipation······400mW
V <sub>CBO</sub> ——Collector-Base Voltage······60V
V <sub>CEO</sub> ——Collector-Emitter Voltage······50V
V <sub>EBO</sub> ——Emitter-Base Voltage······5V
I <sub>C</sub> ——Collector Current······150mA



### **ELECTRICAL CHARACTERISTICS** $(T_a=25^{\circ}C)$

Symbol	Characteristics	Min	Тур	Max	Unit	Test Conditions	
Ісво	Collector Cut-off Current			100	nA	V <sub>CB</sub> =60V, I <sub>E</sub> =0	
<b>І</b> ЕВО	Emitter Cut-off Current			100	nA	$V_{EB}=5V, I_C=0$	
HFE(1)	DC Current Gain	70		700		V <sub>CE</sub> =6V, I <sub>C</sub> =2mA	
HFE(2)		25				V <sub>CE</sub> =6V, I <sub>C</sub> =150mA	
VCE(sat)	Collector- Emitter Saturation Voltage			250	mV	$I_C=100$ mA, $I_B=10$ mA	
VBE(sat)	Base-Emitter Saturation Voltage			1.0	V	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA	
BVcbo	Collector-Base Breakdown Voltage	60			V	I <sub>C</sub> =100 μ A, I <sub>E</sub> =0	
BVCEO	Collector-Emitter Breakdown Voltage	50			V	$I_{C}=1$ mA, $I_{B}=0$	
BVEBO	Emitter-Base Breakdown Voltage	5			V	$I_E=100 \ \mu \ A$ , $I_C=0$	
fT	Current Gain-Bandwidth Product	80			MHz	$V_{CE}=10V$ , $I_{C}=1mA$	

#### hfe Classification

0	Y	GR	BL	
70—140	120—240	200—400	350—700	

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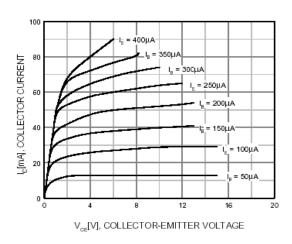


Figure 1. Static Characteristic

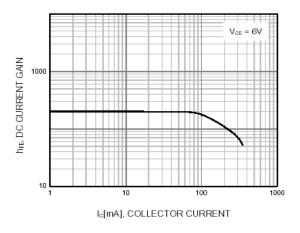


Figure 3. DC current Gain

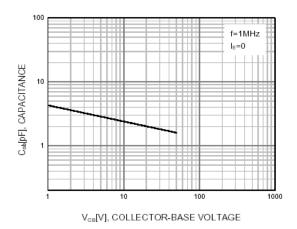


Figure 5. Output Capacitance

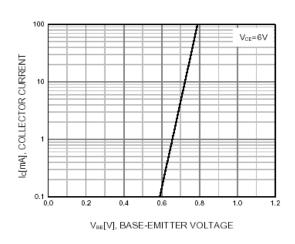


Figure 2. Transfer Characteristic

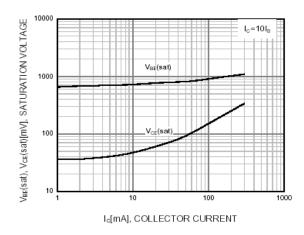


Figure 4. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

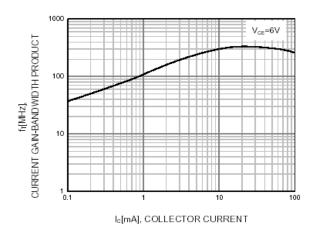


Figure 6. Current Gain Bandwidth Product