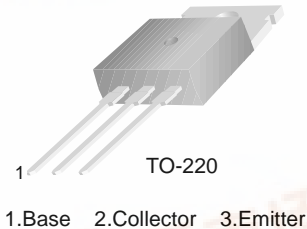


**FAIRCHILD**  
SEMICONDUCTOR™

## KSD73

### Low Frequency High Power Amplifier

- Collector-Base Voltage :  $V_{CBO} = 100V$
- Collector Current :  $I_C = 5A$
- Collector Dissipation :  $P_C = 30W$  ( $T_C=25^\circ C$ )



### NPN Epitaxial Silicon Transistor

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

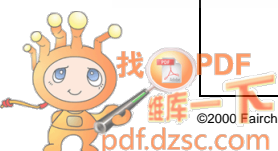
Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	5	A
$P_C$	Collector Dissipation ( $T_C=25^\circ C$ )	30	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature	- 55 ~ 150	$^\circ C$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = 1mA, I_E = 0$	100			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 20mA, I_B = 0$	60			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = 1mA, I_C = 0$	5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = 100V, I_E = 0$			5	mA
$h_{FE}$	DC Current Gain	$V_{CE} = 10V, I_C = 1.0A$	70		240	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 5A, I_B = 0.5A$			2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 5A, I_B = 0.5A$			1.5	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = 10V, I_C = 0.3A$		20		MHz
$V_{BE(on)}$	Base-Emitter ON Voltage	$V_{CE} = 10V, I_E = 1.0A$		0.75		V

### $h_{FE}$ Classification

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



# Typical Characteristics

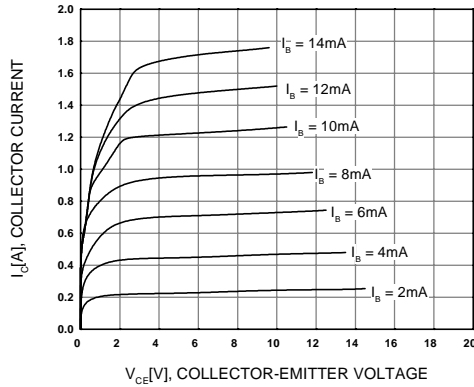


Figure 1. Static Characteristic

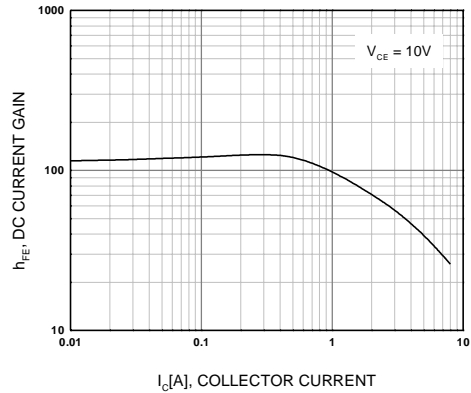


Figure 2. DC current Gain

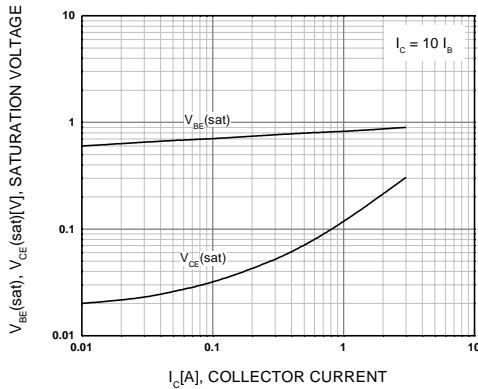


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

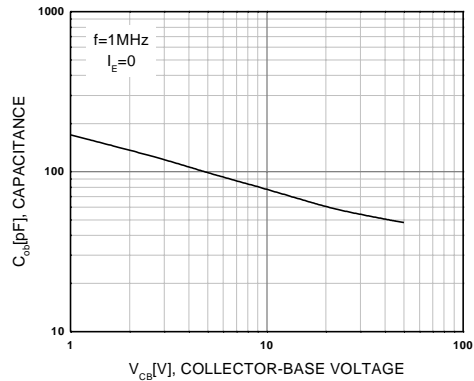


Figure 4. Collector Output Capacitance

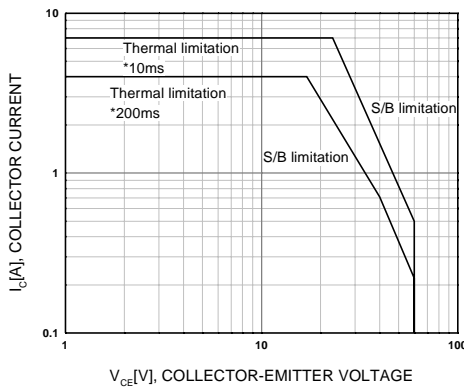


Figure 5. Safe Operating Area

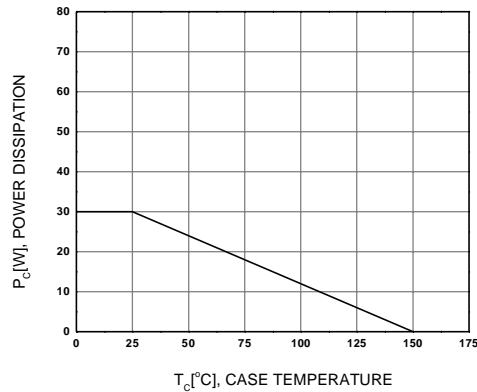
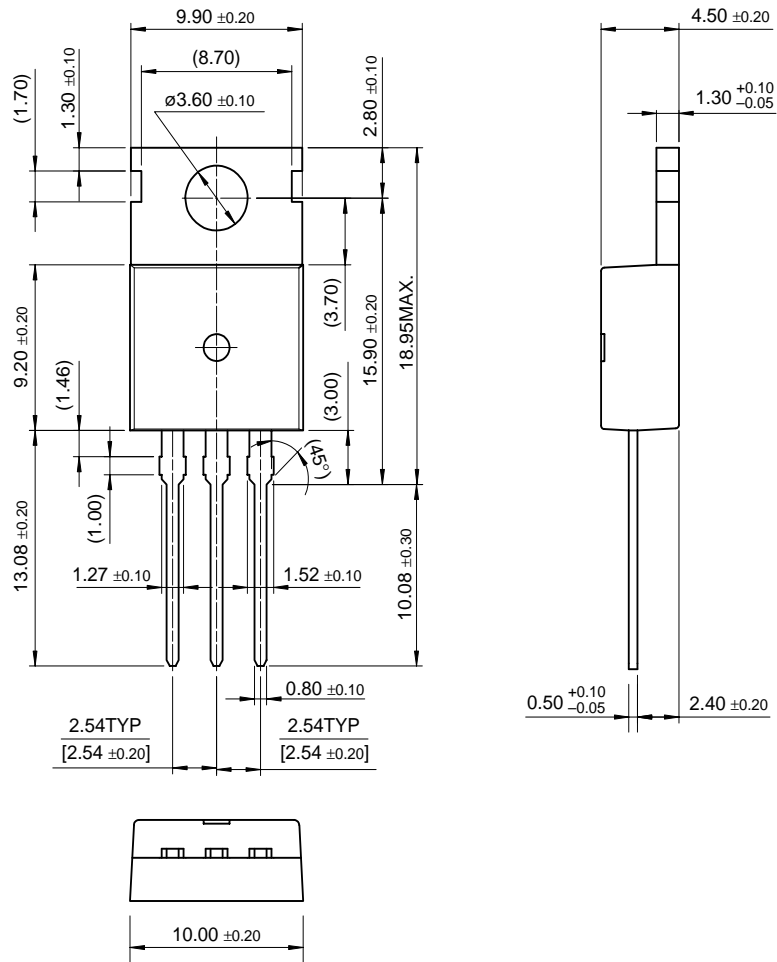


Figure 6. Power Derating

# Package Dimensions

## TO-220



Dimensions in Millimeters

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E <sup>2</sup> CMOS™	PowerTrench®	VCX™
FACT™	QFET™	
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