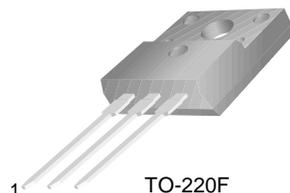


KSD1273

KSD1273

High h_{FE} , AF Power Amplifier

- "Full PAK" Package for Simplified Mounting Only by a Screw, Requires no Insulator.



TO-220F
1.Base 2.Collector 3.Emitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current (DC)	3	A
I_{CP}	Collector Current (Pulse)	6	A
I_B	Base Current	1	A
P_C	Collector Dissipation ($T_a=25^\circ\text{C}$)	2	W
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	40	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$

Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Voltage	$I_C = 25\text{mA}, I_B = 0$	60			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = 80\text{V}, I_E = 0$			100	μA
I_{CEO}	Collector Cut-off Current	$V_{CE} = 60\text{V}, I_B = 0$			100	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 6\text{V}, I_C = 0$			100	μA
h_{FE}	DC Current Gain	$V_{CE} = 4\text{V}, I_C = 0.5\text{A}$	500		2500	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C = 2\text{A}, I_B = 0.05\text{A}$			1	V
f_T	Current Gain Bandwidth Product	$V_{CE} = 12\text{V}, I_C = 0.2\text{A}$		30		MHz

h_{FE} Classification

Classification	Q	P	O
h_{FE}	500 ~ 1000	800 ~ 1500	1200 ~ 2500

Typical Characteristics

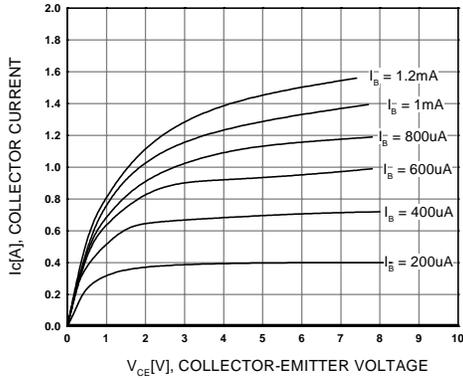


Figure 1. Static Characteristic

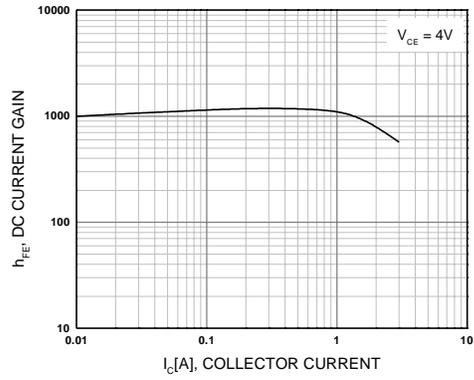


Figure 2. DC current Gain

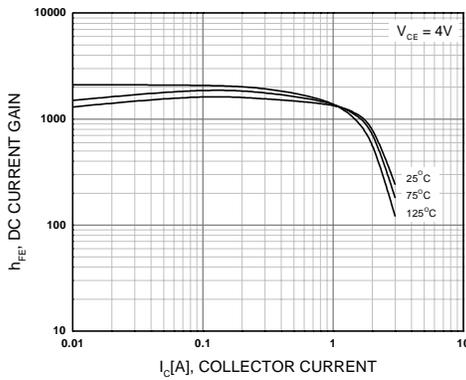


Figure 3. DC current Gain

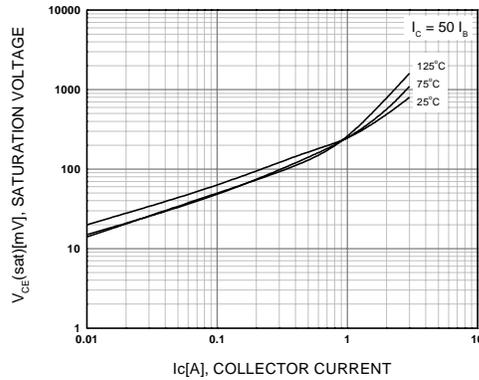


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

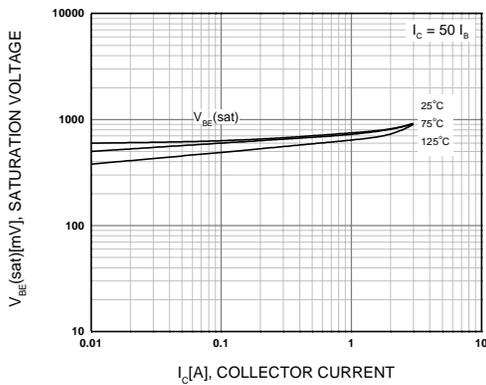


Figure 5. Collector-Base Saturation Voltage

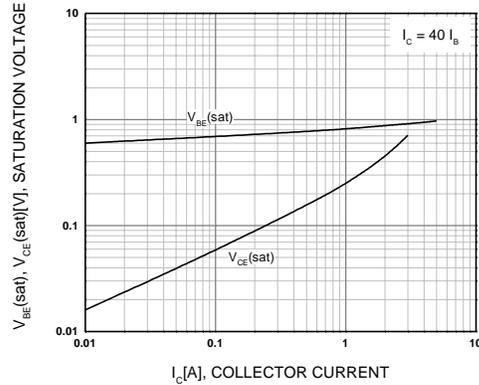


Figure 6. Base-Emitter Saturation Voltage

Typical Characteristics (Continued)

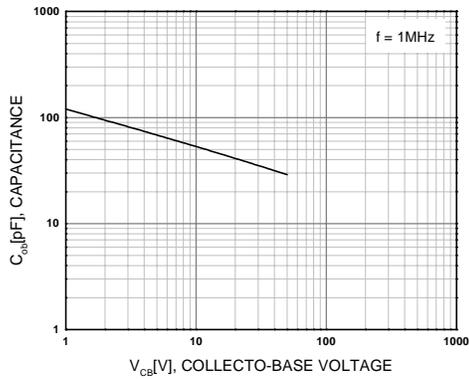


Figure 7. Collector Output Capacitance

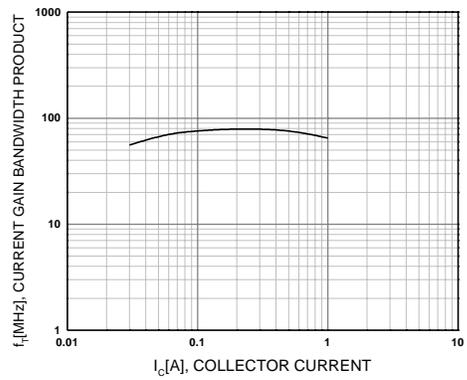


Figure 8. Current Gain Bandwidth Product

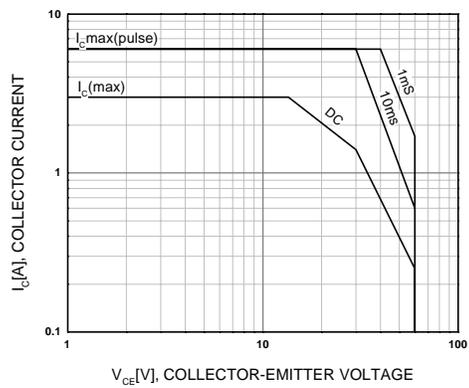


Figure 9. Safe Operating Area

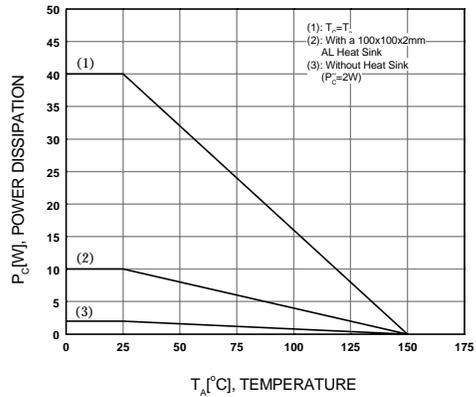
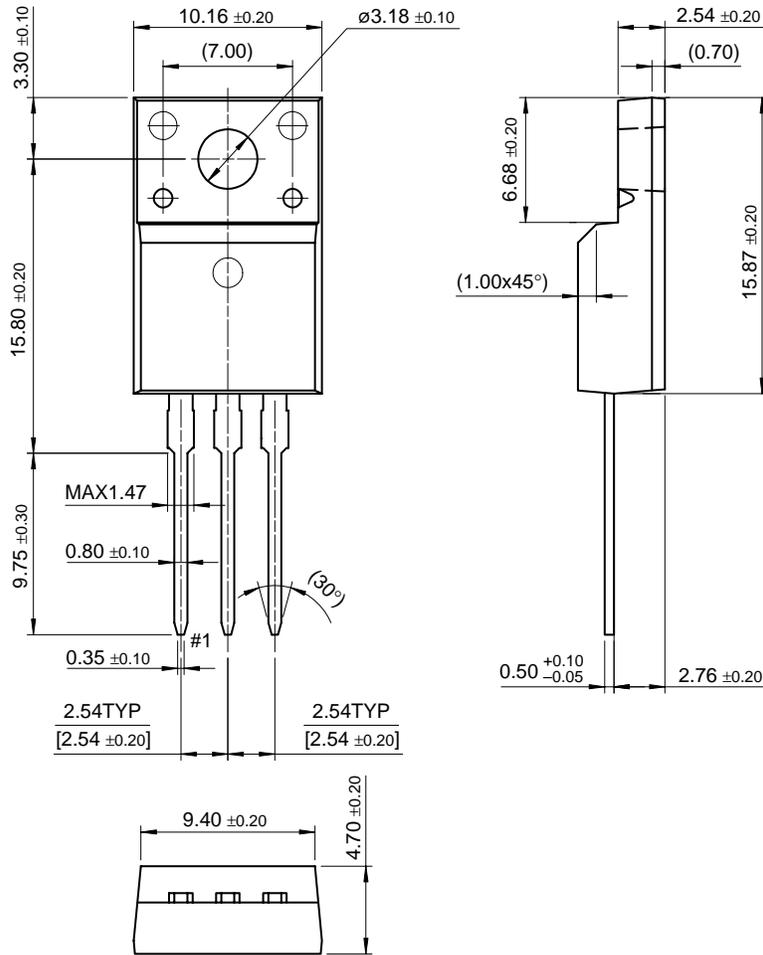


Figure 10. Power Derating

Package Dimensions

KSD1273

TO-220F



Dimensions in Millimeters

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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.
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Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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KSD1273

NPN Epitaxial Silicon Transistor

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Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
KSD1273OTU	Full Production	Full Production	\$0.408	TO-220F	3	RAIL	Line 1: \$Y (Fairchild logo) Line 2: D1273-O Line 3: &3
KSD1273P	Full Production	Full Production	\$0.408	TO-220F	3	BULK	Line 1: \$Y (Fairchild logo) Line 2: D1273-P Line 3: &3
KSD1273PTSTU	Full Production		\$0.408	TO-220F	3	RAIL	Line 1: \$Y (Fairchild logo)

							Line 2: D1273-P Line 3: &3
KSD1273PTU	Full Production		\$0.408	TO-220F	3	RAIL	Line 1: \$Y (Fairchild logo) Line 2: D1273-P Line 3: &3
KSD1273QTU	Full Production		\$0.408	TO-220F	3	RAIL	Line 1: \$Y (Fairchild logo) Line 2: D1273-Q Line 3: &3
KSD1273QYDTU	Full Production		\$0.408	TO-220F	3	RAIL	Line 1: \$Y (Fairchild logo) Line 2: D1273-Q Line 3: &3

* Fairchild 1,000 piece Budgetary Pricing

** A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a [Fairchild distributor](#) to obtain samples



Indicates product with Pb-free second-level interconnect. For more information [click here](#).

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Qualification Support

Click on a product for detailed qualification data

Product
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KSD1273P
KSD1273PTSTU
KSD1273PTU
KSD1273QTU
KSD1273QYDTU

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