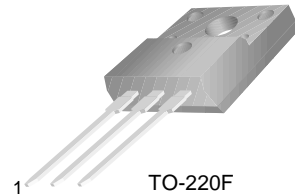


KSC5042F

KSC5042F

High Voltage Switching Dynamic Focus Application

- High Collector-Emitter Breakdown Voltage : $BV_{CEO}=900V$
- Small $C_{ob}=2.8pF$ (Typ.)
- Wide S.O.A
- High reliability



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

NPN Triple Diffused Planar Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	900	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	100	mA
I_{CP}	Collector Current (Pulse)	300	mA
P_C	Collector Dissipation ($T_C=25^\circ C$)	6	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	$I_C = 1mA, I_E = 0$	1500			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = 5mA, I_B = 0$	900			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = 1mA, I_C = 0$	5			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = 900V, I_E = 0$			10	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 4V, I_C = 0$			10	μA
h_{FE}	DC Current Gain	$V_{CE} = 5V, I_C = 10mA$	30			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 20mA, I_B = 4mA$			5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 20mA, I_B = 4mA$			2	V
C_{ob}	Output Capacitance	$V_{CB} = 100V, f = 1MHz$		2.8		pF

Typical Characteristics

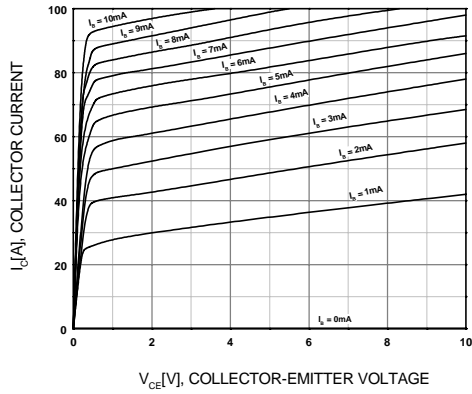


Figure 1. Static Characteristic

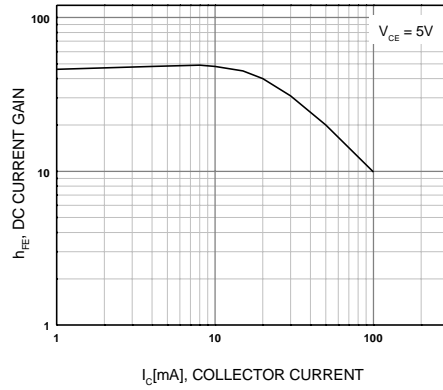


Figure 2. DC current Gain

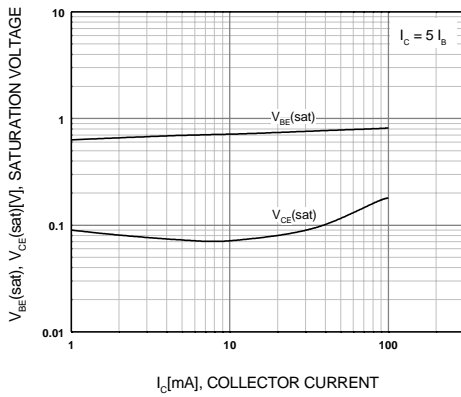


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

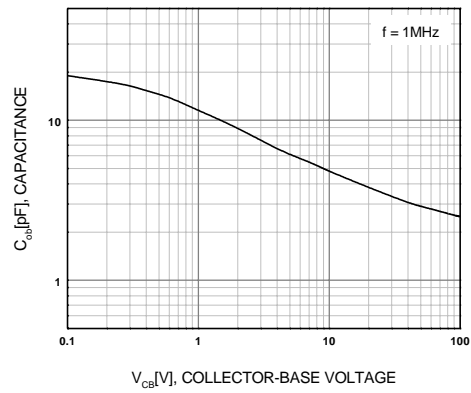


Figure 4. Collector-Base Capacitance

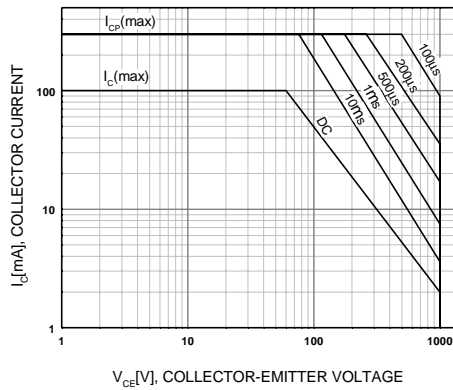


Figure 5. Safe Operating Area

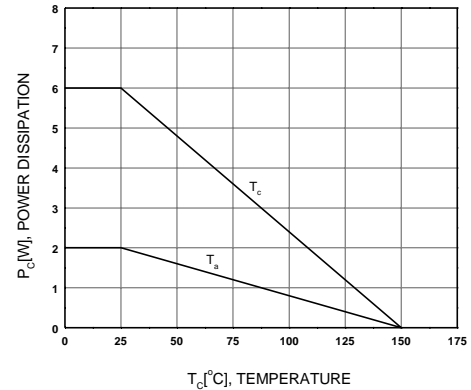
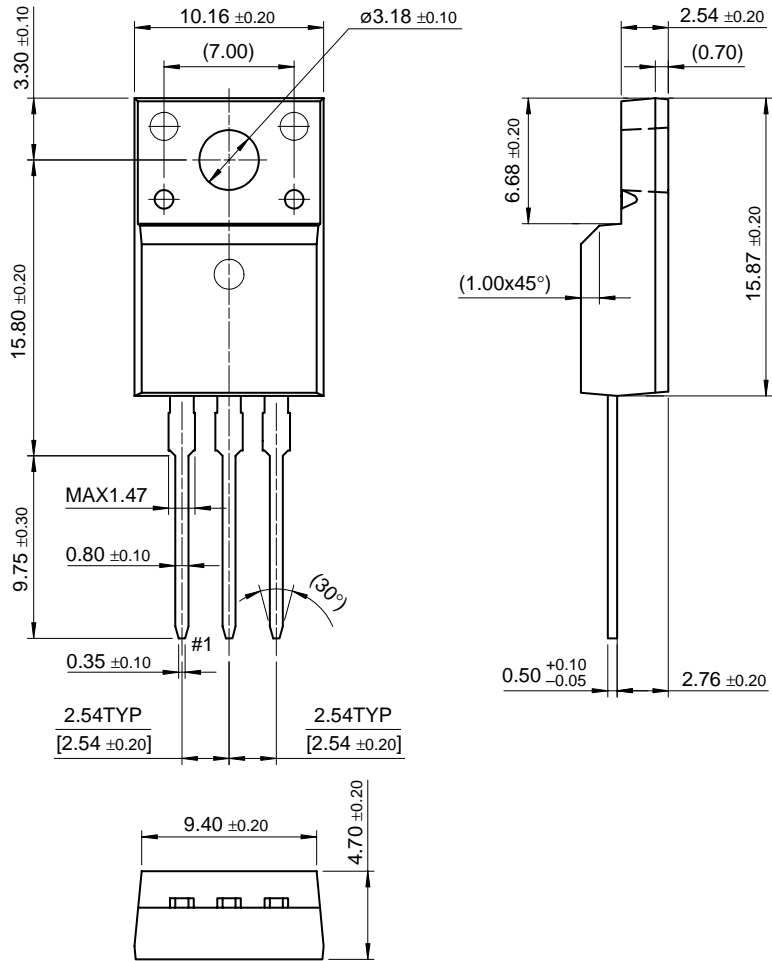


Figure 6. Power Derating

Package Dimensions

KSC5042F

TO-220F



Dimensions in Millimeters

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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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KSC5042F

NPN Triple Diffused Planar Silicon Transistor

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Features

- High Collector-Emitter Breakdown Voltage: $BV_{CEO}=900V$
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High Voltage Switching Dynamic Focus

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Product status/pricing/packaging

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Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
KSC5042FTU	Full Production	Full Production	\$0.372	TO-220F	3	RAIL	Line 1: \$Y (Fairchild logo) Line 2: C5042F Line 3: &3
KSC5042FYDTU	Full Production	Full Production	\$0.372	TO-220F	3	RAIL	Line 1: \$Y (Fairchild logo) Line 2: C5042F 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](#).

Package marking information for product KSC5042F is available. [Click here for more information](#).

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Qualification Support

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Product
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KSC5042FYDTU

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