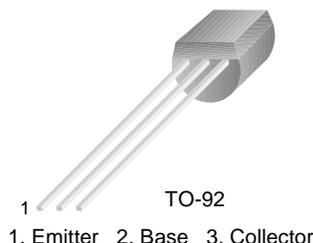


KSP2222A

General Purpose Transistor

- Collector-Emitter Voltage: $V_{CE0} = 40V$
- Collector Power Dissipation: $P_C (\text{max}) = 625mW$
- Refer KSP2222 for graphs



NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	75	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	600	mA
P_C	Collector Power Dissipation	625	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

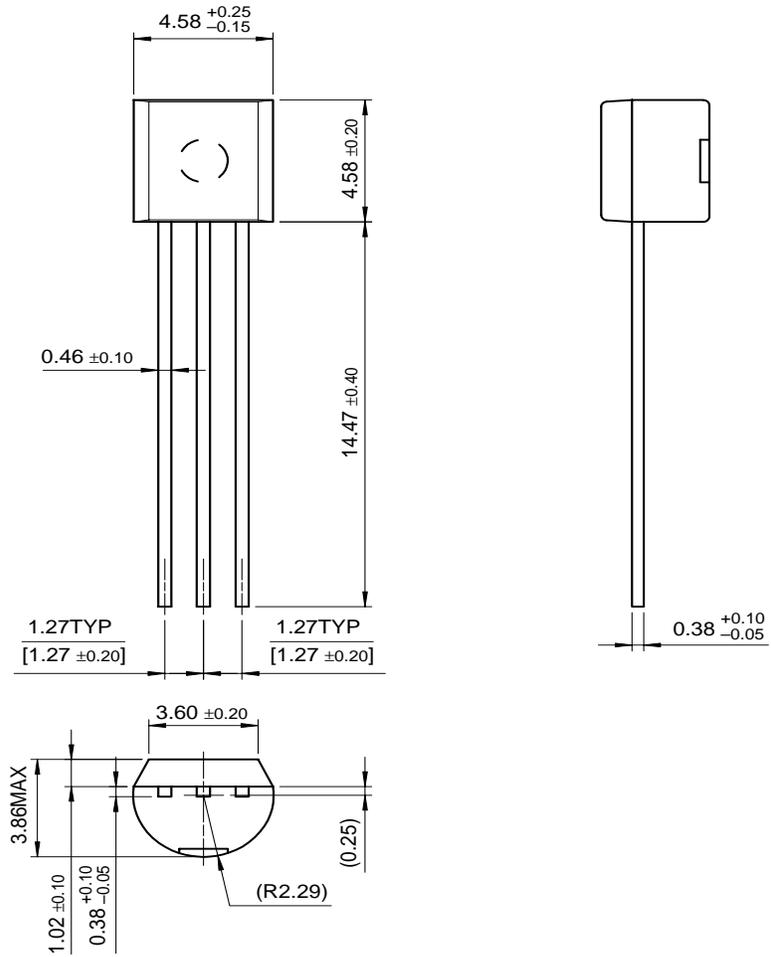
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = 10\mu A, I_E = 0$	75			V
BV_{CEO}	Collector Emitter Breakdown Voltage	$I_C = 10mA, I_B = 0$	40			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = 10\mu A, I_C = 0$	6			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = 60V, I_E = 0$			0.01	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 3V, I_C = 0$			10	nA
h_{FE}	DC Current Gain	$I_C = 0.1mA, V_{CE} = 10V$ $V_{CE} = 10V, I_C = 1mA$ $V_{CE} = 10V, I_C = 10mA$ $V_{CE} = 10V, *I_C = 150mA$ $V_{CE} = 10V, *I_C = 500mA$	35 50 75 100 40		300	
$V_{CE} (\text{sat})$	* Collector-Emitter Saturation Voltage	$I_C = 150mA, I_B = 15mA$ $I_C = 500mA, I_B = 50mA$			0.3 1	V V
$V_{BE} (\text{sat})$	* Base-Emitter Saturation Voltage	$I_C = 150mA, I_B = 15mA$ $I_C = 500mA, I_B = 50mA$		0.6	1.2 2	V V
f_T	Current Gain Bandwidth Product	$V_{CE} = 20V, I_C = 20mA$ $f = 100MHz$	300			MHz
C_{ob}	Output Capacitance	$V_{CB} = 10V, I_E = 0, f = 1MHz$			8	pF
t_{ON}	Turn On Time	$V_{CC} = 30V, I_C = 150mA$ $I_{B1} = 15mA, V_{BE} (\text{off}) = 0.5V$			35	ns
t_{OFF}	Turn Off Time	$V_{CC} = 30V, I_C = 150mA$ $I_{B1} = I_{B2} = 15mA$			285	ns
NF	Noise Figure	$I_C = 100\mu A, V_{CE} = 10V$ $R_S = 1K\Omega, f = 1KHz$			4	dB

* Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$
* Also available as and PN2222A

Package Dimensions

KSP2222A

TO-92



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.
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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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Product	Product status	Pricing*	Package type	Leads	Packing method
KSP2222ATF	Full Production	\$0.05	TO-92	3	TAPE REEL
KSP2222ABU	Full Production	\$0.05	TO-92	3	BULK
KSP2222AIUTA	Full Production	\$0.05	TO-92	3	TAPE REEL
KSP2222ATA	Full Production	\$0.05	TO-92	3	TAPE REEL

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