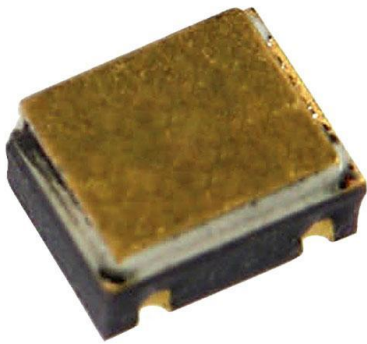


2N2222AUB Datasheet

www.digi-electronics.com



2N2222AUB

<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	2N2222AUB-DG
Manufacturer	TT Electronics/Optek Technology
Manufacturer Product Number	2N2222AUB
Description	TRANS NPN 50V 0.8A SMD
Detailed Description	Bipolar (BJT) Transistor NPN 50 V 800 mA 300 mW Surface Mount Ceramic SMD



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

2N2222AUB

Series:

-

Transistor Type:

NPN

Voltage - Collector Emitter Breakdown (Max):

50 V

Current - Collector Cutoff (Max):

50nA

Power - Max:

300 mW

Operating Temperature:

-65°C ~ 200°C (TJ)

Package / Case:

3-LCC

Base Product Number:

2N2222

Manufacturer:

TT Electronics/Optek Technology

Product Status:

Active

Current - Collector (Ic) (Max):

800 mA

Vce Saturation (Max) @ Ib, Ic:

1V @ 15mA, 500mA

DC Current Gain (hFE) (Min) @ Ic, Vce:

75 @ 1mA, 10V

Frequency - Transition:

-

Mounting Type:

Surface Mount

Supplier Device Package:

Ceramic SMD

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.21.0095

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

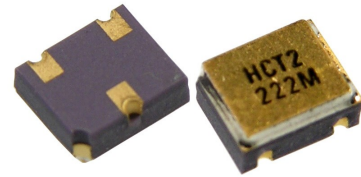
Surface Mount NPN General Purpose Transistor

2N2222AUB



Features:

- Ceramic 3 pin surface mount package (UBN)
- Miniature package to minimize circuit board area
- Hermetically sealed
- Processed per MIL-PRF-19500/255
- Same footprint and pin-out as many SOT-23 package transistors



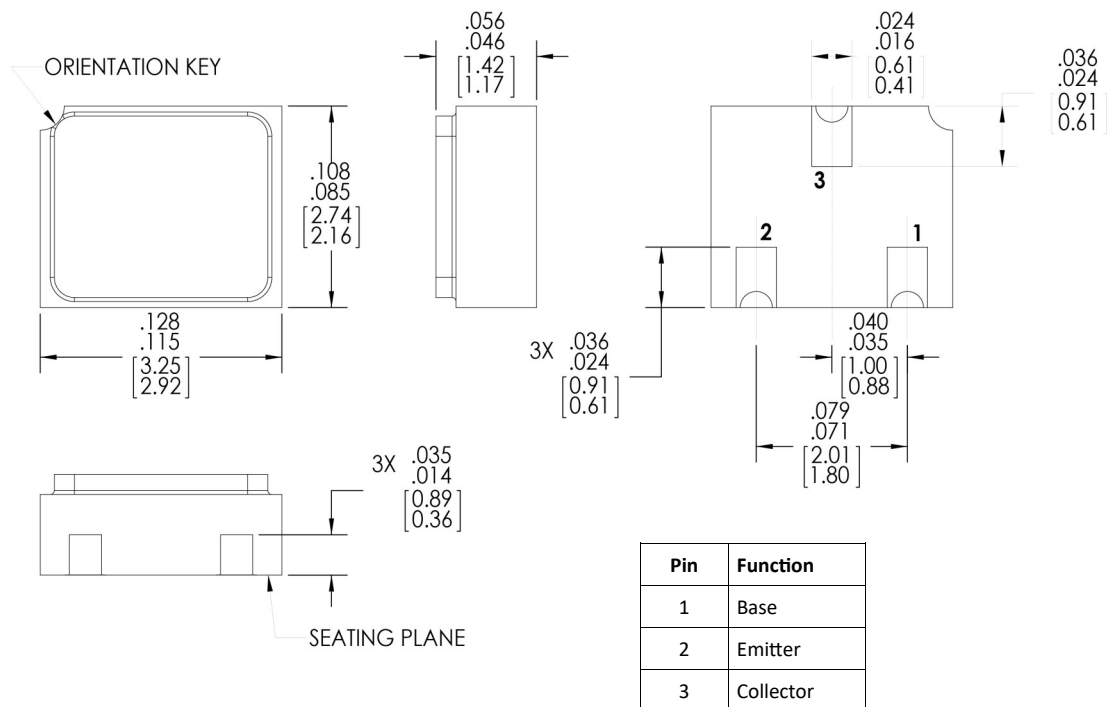
Description:

The 2N2222AUB is a miniature hermetically sealed ceramic surface mount general purpose switching transistor. The miniature three pin ceramic package is ideal for upgrading commercial grade circuits to military reliability levels where plastic SOT-23 devices have been used. The "UB" suffix denotes the 3 terminal chip carrier package.

Typical screening per MIL-PRF-19500/255. Refer to MIL-PRF-19500/255 for complete requirements.

Applications:

- General switching
- Amplification
- Signal processing
- Radio transmission
- Logic gates



General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

TT Electronics | OPTEK Technology
2900 E. Plano Pkwy, Plano, TX 75074 | Ph: +1 972 323 2200
www.ttelectronics.com | sensors@ttelectronics.com

Surface Mount NPN General Purpose Transistor

2N2222AUB



Electrical Specifications

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

Collector-Base Voltage	75 V
Collector-Emitter Voltage	50 V
Emitter-Base Voltage	6.0 V
Collector Current-Continuous	800 mA
Operating Junction Temperature (T_J)	-65°C to $+200^\circ\text{C}$
Storage Junction Temperature (T_{stg})	-65°C to $+200^\circ\text{C}$
Power Dissipation @ $T_A = 25^\circ\text{C}$	0.3 W
Power Dissipation @ $T_C = 25^\circ\text{C}$ ⁽¹⁾	1.00 W
Soldering Temperature (vapor phase reflow for 30 seconds)	215°C
Soldering Temperature (heated collet for 5 seconds)	260°C

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS	TEST CONDITIONS
OFF CHARACTERISTICS					
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	75	-	V	$I_C = 10\ \mu\text{A}$, $I_E = 0$
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	50	-	V	$I_C = 10\ \text{mA}$, $I_B = 0$
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	6.0	-	V	$I_E = 10\ \mu\text{A}$, $I_C = 0$
I_{CBO}	Collector-Base Cutoff Current	-	10	nA	$V_{CB} = 60\ \text{V}$, $I_E = 0$
		-	10	μA	$V_{CB} = 60\ \text{V}$, $I_E = 0$, $T_A = 150^\circ\text{C}$
I_{EBO}	Emitter-Base Cutoff Current	-	10	nA	$V_{EB} = 4\ \text{V}$, $I_C = 0$
I_{CES}	Collector Emitter Cutoff Current	-	50	nA	$V_{CE} = 50\ \text{V}$
ON CHARACTERISTICS					
h_{FE}	Forward-Current Transfer Ratio	50	-	-	$V_{CE} = 10\ \text{V}$, $I_C = 0.1\ \text{mA}$
		75	325	-	$V_{CE} = 10\ \text{V}$, $I_C = 1.0\ \text{mA}$
		100	-	-	$V_{CE} = 10\ \text{V}$, $I_C = 10\ \text{mA}$
		100	300	-	$V_{CE} = 10\ \text{V}$, $I_C = 150\ \text{mA}$ ⁽²⁾
		30	-	-	$V_{CE} = 10\ \text{V}$, $I_C = 500\ \text{mA}$ ⁽²⁾
		35	-	-	$V_{CE} = 10\ \text{V}$, $I_C = 10\ \text{mA}$, $T_A = -55^\circ\text{C}$

Note:

- Derate linearly 6.6 mW/ $^\circ\text{C}$ above 25°C
- Pulse Width $\leq 300\ \mu\text{s}$, Duty Cycle $\leq 2.0\%$

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

TT Electronics | OPTeK Technology
2900 E. Plano Pkwy, Plano, TX 75074 | Ph: +1 972 323 2200
www.ttelectronics.com | sensors@ttelectronics.com

Surface Mount NPN General Purpose Transistor

2N2222AUB



Electrical Specifications

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS	TEST CONDITIONS
ON CHARACTERISTICS					
$V_{CE(SAT)}^{(2)}$	Collector-Emitter Saturation Voltage	-	0.3	V	$I_C = 150\text{ mA}, I_B = 15\text{ mA}$
		-	1.0	V	$I_C = 500\text{ mA}, I_B = 50\text{ mA}$
$V_{BE(SAT)}^{(2)}$	Base-Emitter Saturation Voltage	0.6	1.2	V	$I_C = 150\text{ mA}, I_B = 15\text{ mA}$
		-	2.0	V	$I_C = 500\text{ mA}, I_B = 50\text{ mA}$
SMALL-SIGNAL CHARACTERISTICS					
$ h_{fe} $	Small Signal Forward Current Transfer Ratio	50	-	-	$V_{CE} = 10\text{ V}, I_C = 1.0\text{ mA}, f = 1.0\text{ kHz}$
$ h_{fe} $	Small Signal Forward Current Transfer Ratio	2.5	-	-	$V_{CE} = 20\text{ V}, I_C = 20\text{ mA}, f = 100\text{ MHz}$
C_{obo}	Open Circuit Output Capacitance	-	8.0	pF	$V_{CB} = 10\text{ V}, 100\text{ kHz} \leq f \leq 1.0\text{ MHz}$
C_{ibo}	Input Capacitance (Output Open)	-	25	pF	$V_{EB} = 0.5\text{ V}, 100\text{ kHz} \leq f \leq 1.0\text{ MHz}$
SWITCHING CHARACTERISTICS					
t_{on}	Turn-On Time	-	35	ns	$V_{CC} = 30\text{ V}, I_C = 150\text{ mA}, I_{B1} = 15\text{ mA}$
t_{off}	Turn-Off Time	-	300	ns	$V_{CC} = 30\text{ V}, I_C = 150\text{ mA}, I_{B1} = I_{B2} = 15\text{ mA}$

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

TT Electronics | OPTeK Technology
2900 E. Plano Pkwy, Plano, TX 75074 | Ph: +1 972 323 2200
www.ttelectronics.com | sensors@ttelectronics.com

OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we stricly control the quality of products and services. Welcome your RFQ to

Email: Info@DiGi-Electronics.com



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.