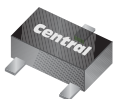


CMUT5401

SURFACE MOUNT
PNP SILICON TRANSISTOR

ULTRAmulti™



SOT-523 CASE

Central
Semiconductor Corp.

www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMUT5401 type is a PNP silicon transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high voltage amplifier applications.

MARKING CODE: 54C

MAXIMUM RATINGS: ($T_A=25^{\circ}\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

V_{CBO} 160
 V_{CEO} 150
 V_{EBO} 5.0
 I_C 600
 P_D 250
 T_J, T_{stg} -65 to +150
 θ_{JA} 500

UNITS

V
V
V
mA
mW
 $^{\circ}\text{C}$
 $^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

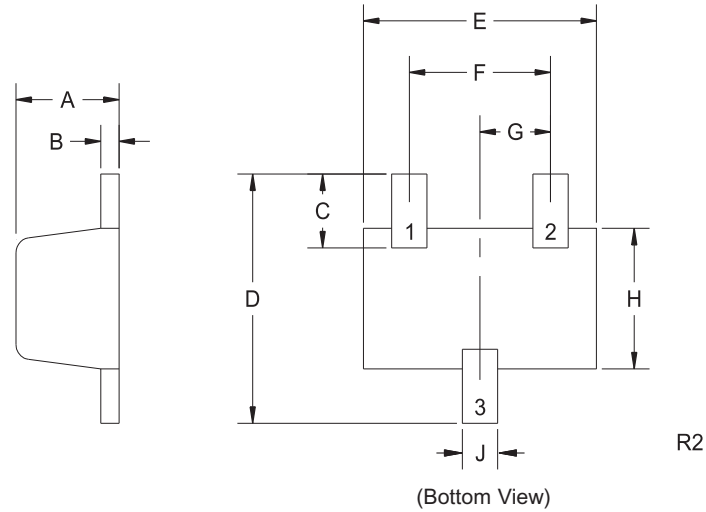
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=120\text{V}$		50	nA
I_{CBO}	$V_{CB}=120\text{V}, T_A=100^{\circ}\text{C}$		50	μA
I_{EBO}	$V_{EB}=3.0\text{V}$		50	nA
BV_{CBO}	$I_C=100\mu\text{A}$	160		V
BV_{CEO}	$I_C=1.0\text{mA}$	150		V
BV_{EBO}	$I_E=10\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.2	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.5	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		1.0	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		1.0	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	50		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	60	240	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=50\text{mA}$	50		
f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100	300	MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		6.0	pF
h_{fe}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	40	200	
N_F	$V_{CE}=5.0\text{V}, I_C=250\mu\text{A}, R_S=1.0\text{k}\Omega,$ $f=10\text{Hz to } 15.7\text{kHz}$		8.0	dB

R2 (9-February 2010)

CMUT5401
SURFACE MOUNT
PNP SILICON TRANSISTOR



SOT-523 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Base
- 2) Emitter
- 3) Collector

MARKING CODE: 54C

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.023	0.031	0.58	0.78
B	0.002	0.008	0.04	0.20
C	0.013	0.021	0.34	0.54
D	0.059	0.067	1.50	1.70
E	0.059	0.067	1.50	1.70
F	0.035	0.043	0.90	1.10
G	0.020		0.50	
H	0.031	0.039	0.78	0.98
J	0.010	0.014	0.25	0.35

SOT-523 (REV: R2)

R2 (9-February 2010)