



**CMUT5401**

**SURFACE MOUNT  
PNP SILICON TRANSISTOR**

**ULTRAmi™**



**SOT-523 CASE**

# Central™

**Semiconductor Corp.**

**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<sub>A</sub>=25°C)**

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

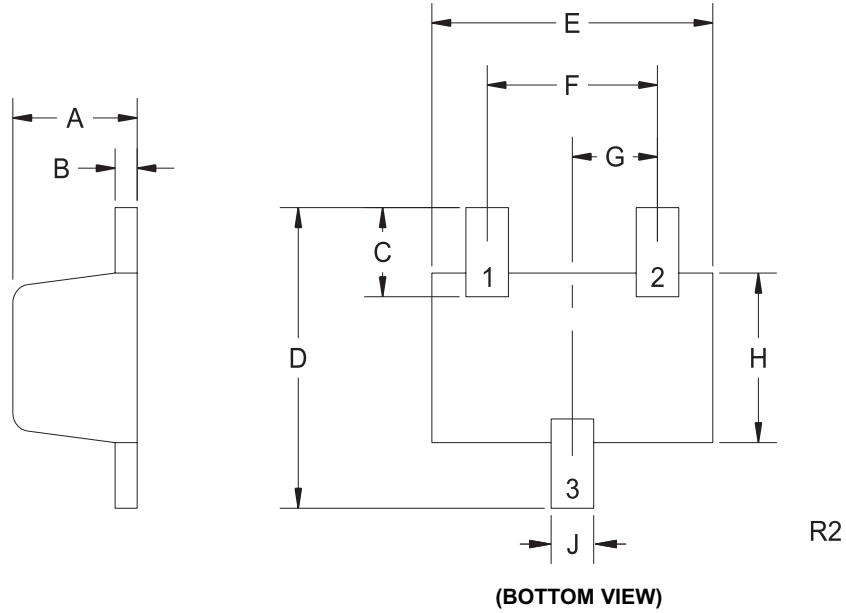
SYMBOL		UNITS
V <sub>CBO</sub>	160	V
V <sub>CEO</sub>	150	V
V <sub>EBO</sub>	5.0	V
I <sub>C</sub>	600	mA
P <sub>D</sub>	250	mW
T <sub>J</sub> , T <sub>stg</sub>	-65 to +150	°C
θ <sub>JA</sub>	500	°C/W

**ELECTRICAL CHARACTERISTICS: (T<sub>A</sub>=25°C unless otherwise noted)**

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>CBO</sub>	V <sub>CB</sub> =120V		50	nA
I <sub>CBO</sub>	V <sub>CB</sub> =120V, T <sub>A</sub> =100°C		50	μA
I <sub>EBO</sub>	V <sub>EB</sub> =3.0V		50	nA
BV <sub>CBO</sub>	I <sub>C</sub> =100μA	160		V
BV <sub>CEO</sub>	I <sub>C</sub> =1.0mA	150		V
BV <sub>EBO</sub>	I <sub>E</sub> =10μA	5.0		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA		0.2	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5.0mA		0.5	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA		1.0	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5.0mA		1.0	V
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0mA	50		
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA	60	240	
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =50mA	50		
f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =10mA, f=100MHz	100	300	MHz
C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1.0MHz		6.0	pF
h <sub>fe</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1.0mA, f=1.0kHz	40	200	
N <sub>F</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =250μA, R <sub>S</sub> =1.0kΩ f=10Hz to 15.7kHz		8.0	dB

R1 (29-May 2009)

SOT-523 CASE - MECHANICAL OUTLINE



**LEAD CODE:**

- 1) BASE
- 2) EMITTER
- 3) COLLECTOR

**MARKING CODE: 54C**

<b>DIMENSIONS</b>				
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)