

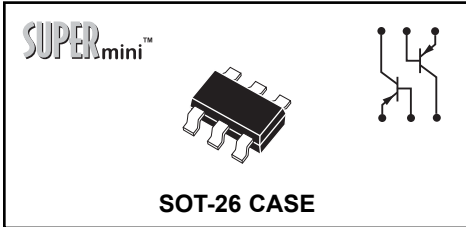
**CMXT3906**  
**SURFACE MOUNT**  
**SUPERmini™**  
**DUAL PNP SILICON TRANSISTOR**

# Central™

**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMXT3906 type is a dual PNP silicon transistor manufactured by the epitaxial planar process, epoxy molded in a SUPERmini™ surface mount package, designed for small signal general purpose amplifier and switching applications.



**MARKING CODE: X2A**

**MAXIMUM RATINGS:** (T<sub>A</sub>=25°C)

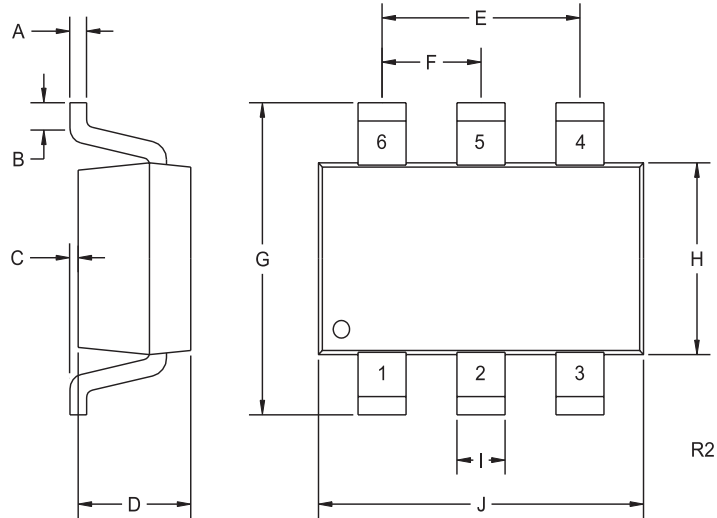
	SYMBOL		UNITS
Collector-Base Voltage	V <sub>CBO</sub>	40	V
Collector-Emitter Voltage	V <sub>CEO</sub>	40	V
Emitter-Base Voltage	V <sub>EBO</sub>	5.0	V
Collector Current	I <sub>C</sub>	200	mA
Power Dissipation	P <sub>D</sub>	350	mW
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150	°C
Thermal Resistance	θ <sub>JA</sub>	357	°C/W

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>CEV</sub>	V <sub>CE</sub> =30V, V <sub>EB</sub> =3.0V		50	nA
BV <sub>CBO</sub>	I <sub>C</sub> =10μA	40		V
BV <sub>CEO</sub>	I <sub>C</sub> =1.0mA	40		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		0.25	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5.0mA		0.40	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA	0.65	0.85	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5.0mA		0.95	V
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =0.1mA	60		
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =1.0mA	80		
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =10mA	100	300	
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =50mA	60		
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =100mA	30		
f <sub>T</sub>	V <sub>CE</sub> =20V, I <sub>C</sub> =10mA, f=100MHz	250		MHz
C <sub>ob</sub>	V <sub>CB</sub> =5.0V, I <sub>E</sub> =0, f=1.0MHz		4.5	pF
C <sub>ib</sub>	V <sub>BE</sub> =0.5V, I <sub>C</sub> =0, f=1.0MHz		10	pF
h <sub>ie</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1.0mA, f=1.0kHz	2.0	12	kΩ
h <sub>re</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1.0mA, f=1.0kHz	0.1	10	x10 <sup>-4</sup>
h <sub>fe</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1.0mA, f=1.0kHz	100	400	
h <sub>oe</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1.0mA, f=1.0kHz	3.0	60	μmhos
NF	V <sub>CE</sub> =5.0V, I <sub>C</sub> =100μA, R <sub>S</sub> =1.0kΩ f=10Hz to 15.7kHz		4.0	dB
t <sub>d</sub>	V <sub>CC</sub> =3.0V, V <sub>BE</sub> =0.5V, I <sub>C</sub> =10mA, I <sub>B1</sub> =1.0mA		35	ns
t <sub>r</sub>	V <sub>CC</sub> =3.0V, V <sub>BE</sub> =0.5V, I <sub>C</sub> =10mA, I <sub>B1</sub> =1.0mA		35	ns
t <sub>s</sub>	V <sub>CC</sub> =3.0V, I <sub>C</sub> =10mA, I <sub>B1</sub> =I <sub>B2</sub> =1.0mA		225	ns
t <sub>f</sub>	V <sub>CC</sub> =3.0V, I <sub>C</sub> =10mA, I <sub>B1</sub> =I <sub>B2</sub> =1.0mA		75	ns

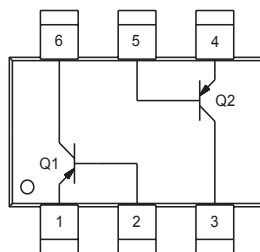
R2 (06-August 2003)

SOT-26 CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.007	0.11	0.19
B	0.016	-	0.40	-
C	-	0.004	-	0.10
D	0.039	0.047	1.00	1.20
E	0.074	0.075	1.88	1.92
F	0.037	0.038	0.93	0.97
G	0.102	0.118	2.60	3.00
H	0.059	0.067	1.50	1.70
I	0.016		0.41	
J	0.110	0.118	2.80	3.00

SOT-26 (REV: R2)



**LEAD CODE:**

- 1) EMITTER Q1
- 2) BASE Q1
- 3) COLLECTOR Q2
- 4) EMITTER Q2
- 5) BASE Q2
- 6) COLLECTOR Q1

**MARKING CODE: X2A**

R2 (06-August 2003)