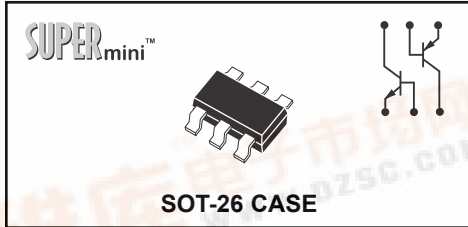


CMXT3946
SURFACE MOUNT
SUPERmini™
DUAL COMPLEMENTARY
SILICON TRANSISTOR



Central™
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMXT3946 type is a dual complementary silicon transistor manufactured by the epitaxial planar process, epoxy molded in a SUPERmini™ surface mount package, designed for small signal general purpose and switching applications.

MARKING CODE: X46

MAXIMUM RATINGS: (T_A=25°C)

	SYMBOL	NPN	PNP	UNITS
Collector-Base Voltage	V _{CB0}	60	40	V
Collector-Emitter Voltage	V _{CEO}	40	40	V
Emitter-Base Voltage	V _{EBO}	6.0	5.0	V
Collector Current	I _C	200		mA
Power Dissipation	P _D	350		mW
Operating and Storage Junction Temperature	T _J , T _{stg}	-65 to +150		°C
Thermal Resistance	θ _{JA}	357		°C/W

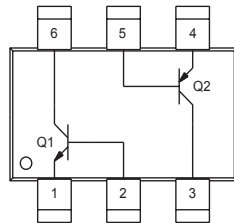
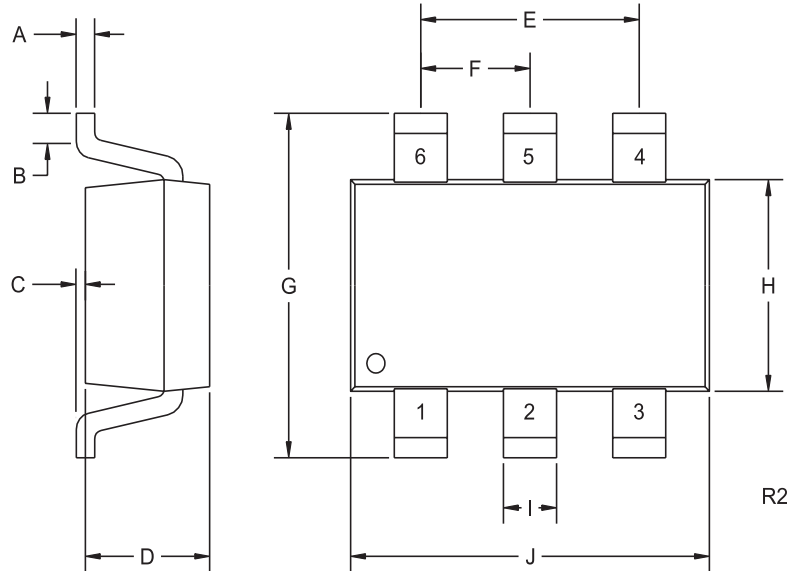
ELECTRICAL CHARACTERISTICS PER TRANSISTOR: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	NPN		PNP		UNITS
		MIN	MAX	MIN	MAX	
I _{CEV}	V _{CE} =30V, V _{EB} =3.0V		50		50	nA
BV _{CB0}	I _C =10μA	60		40		V
BV _{CEO}	I _C =1.0mA	40		40		V
BV _{EBO}	I _E =10μA	6.0		5.0		V
V _{CE(SAT)}	I _C =10mA, I _B =1.0mA		0.20		0.25	V
V _{CE(SAT)}	I _C =50mA, I _B =5.0mA		0.30		0.40	V
V _{BE(SAT)}	I _C =10mA, I _B =1.0mA	0.65	0.85	0.65	0.85	V
V _{BE(SAT)}	I _C =50mA, I _B =5.0mA		0.95		0.95	V
h _{FE}	V _{CE} =1.0V, I _C =0.1mA	40		60		
h _{FE}	V _{CE} =1.0V, I _C =1.0mA	70		80		
h _{FE}	V _{CE} =1.0V, I _C =10mA	100	300	100	300	
h _{FE}	V _{CE} =1.0V, I _C =50mA	60		60		
h _{FE}	V _{CE} =1.0V, I _C =100mA	30		30		
f _T	V _{CE} =20V, I _C =10mA, f=100MHz	300		250		MHz
C _{ob}	V _{CB} =5.0V, I _E =0, f=1.0MHz		4.0		4.5	pF
C _{ib}	V _{BE} =0.5V, I _C =0, f=1.0MHz		8.0		10	pF
h _{ie}	V _{CE} =10V, I _C =1.0mA, f=1.0kHz	1.0	10	2.0	12	kΩ
h _{re}	V _{CE} =10V, I _C =1.0mA, f=1.0kHz	0.5	8.0	0.1	10	x10 ⁻⁴
h _{fe}	V _{CE} =10V, I _C =1.0mA, f=1.0kHz	100	400	100	400	
h _{oe}	V _{CE} =10V, I _C =1.0mA, f=1.0kHz	1.0	40	3.0	60	μmhos
NF	V _{CE} =5.0V, I _C =100μA, R _S =1.0kΩ f=10Hz to 15.7kHz		5.0		4.0	dB
t _d	V _{CC} =3.0V, V _{BE} =0.5V, I _C =10mA, I _{B1} =1.0mA		35		35	ns
t _r	V _{CC} =3.0V, V _{BE} =0.5V, I _C =10mA, I _{B1} =1.0mA		35		35	ns
t _s	V _{CC} =3.0V, I _C =10mA, I _{B1} =I _{B2} =1.0mA		200		225	ns
t _f	V _{CC} =3.0V, I _C =10mA, I _{B1} =I _{B2} =1.0mA		50		75	ns

R2 (06-August 2003)



SOT-26 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODE: X46

SYMBOL	DIMENSIONS			
	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)