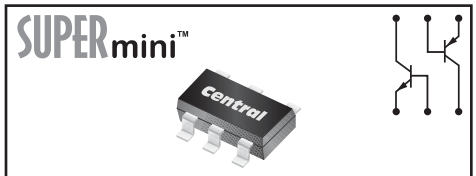
CMXT3946

SURFACE MOUNT
DUAL COMPLEMENTARY
SILICON TRANSISTORS



SOT-26 CASE

Central Semiconductor Corp.

www.centralsemi.com

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, and 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_{CBO}	60	40	V
Collector-Emitter Voltage	V_{CEO}	40	40	V
Emitter-Base Voltage	V_{EBO}	6.0	5.0	V
Continuous 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)

		NPN		**PNP**		
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**UNITS**
I_{CEV}	V_{CE}=30V, V_{EB}=3.0V	-	50	-	50	nA
BV_{CBO}	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	$x10^{-4}$

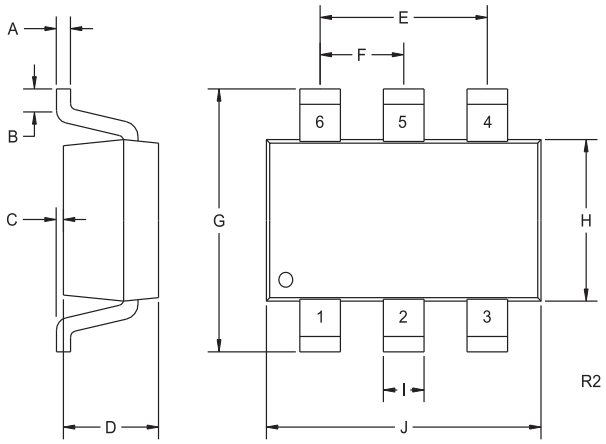
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ELECTRICAL CHARACTERISTICS PER TRANSISTOR - Continued: (T_A=25°C unless otherwise noted)

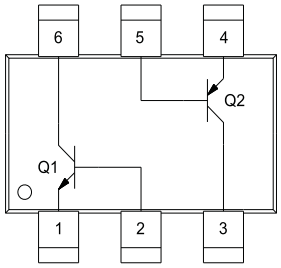
		NPN		PNP		
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**UNITS**
h_{fe}	V_{CE}=10V, I_C=1.0mA, f=1.0kHz	100	400	100	400	
h_{oe}	V_{CE}=10V, I_C=1.0mA, f=1.0kHz	1.0	40	3.0	60	μS
NF	V_{CE}=5.0V, I_C=100μA, R_S=1.0kΩ, f=10Hz to 15.7kHz	-	5.0	-	4.0	dB
t_d	V_{CC}=3.0V, V_{BE}=0.5V, I_C=10mA, 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

SOT-26 CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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: X46

R3 (12-February 2010)