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Manufacturers of World Class Discrete Semiconductors

CMXT3906

SURFACE MOUNT
DUAL PNP SILICON TRANSISTOR

SOT-26 CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMXT3906 type is a dual PNP silicon transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for small signal general purpose amplifier and switching applications. Marking Code is **X2A**.

MAXIMUM RATINGS: (T_A=25°C)

	<u>SYMBOL</u>		<u>UNITS</u>
Collector-Base Voltage	V _{CB0}	40	V
Collector-Emitter Voltage	V _{CEO}	40	V
Emitter-Base Voltage	V _{EB0}	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)

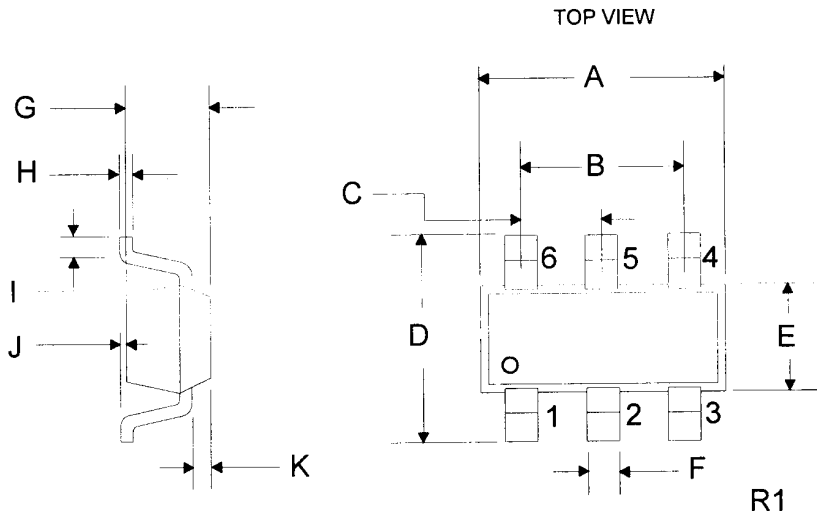
<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
I _{CEV}	V _{CE} =30V, V _{EB} =3.0V		50	nA
BV _{CB0}	I _C =10μA	40		V
BV _{CEO}	I _C =1.0mA	40		V
BV _{EB0}	I _E =10μA	5.0		V
V _{CE(SAT)}	I _C =10mA, I _B =1.0mA		0.25	V
V _{CE(SAT)}	I _C =50mA, I _B =5.0mA		0.40	V
V _{BE(SAT)}	I _C =10mA, I _B =1.0mA	0.65	0.85	V
V _{BE(SAT)}	I _C =50mA, I _B =5.0mA		0.95	V
h _{FE}	V _{CE} =1.0V, I _C =0.1mA	60		
h _{FE}	V _{CE} =1.0V, I _C =1.0mA	80		
h _{FE}	V _{CE} =1.0V, I _C =10mA	100	300	
h _{FE}	V _{CE} =1.0V, I _C =50mA	60		
h _{FE}	V _{CE} =1.0V, I _C =100mA	30		



ELECTRICAL CHARACTERISTICS PER TRANSISTOR: continued

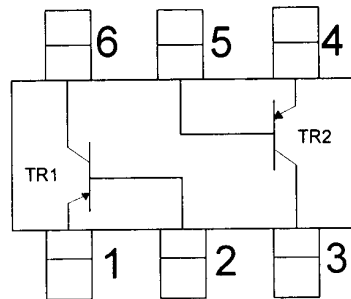
<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
f_T	$V_{CE}=20V, I_C=10mA, f=100MHz$	250		MHz
C_{ob}	$V_{CB}=5.0V, I_E=0, f=1.0MHz$		4.5	pF
C_{ib}	$V_{BE}=0.5V, I_C=0, f=1.0MHz$		10	pF
h_{ie}	$V_{CE}=10V, I_C=1.0mA, f=1.0kHz$	2.0	12	$k\Omega$
h_{re}	$V_{CE}=10V, I_C=1.0mA, f=1.0kHz$	0.1	10	$\times 10^{-4}$
h_{fe}	$V_{CE}=10V, I_C=1.0mA, f=1.0kHz$	100	400	
h_{oe}	$V_{CE}=10V, I_C=1.0mA, f=1.0kHz$	3.0	60	$\mu mhos$
NF	$V_{CE}=5.0V, I_C=100\mu A, R_S=1.0k\Omega$ $f=10Hz$ to $15.7kHz$		4.0	dB
t_d	$V_{CC}=3.0V, V_{BE}=0.5V, I_C=10mA, I_{B1}=1.0mA$		35	ns
t_r	$V_{CC}=3.0V, V_{BE}=0.5V, I_C=10mA, I_{B1}=1.0mA$		35	ns
t_s	$V_{CC}=3.0V, I_C=10mA, I_{B1}=I_{B2}=1.0mA$		225	ns
t_f	$V_{CC}=3.0V, I_C=10mA, I_{B1}=I_{B2}=1.0mA$		75	ns

SOT-26 CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.110	0.118	2.80	3.00
B	0.074	0.075	1.88	1.92
C	0.037	0.038	0.93	0.97
D	0.102	0.118	2.60	3.00
E	0.059	0.067	1.50	1.70
F	0.016	0.018	0.40	0.45
G	0.039	0.047	1.00	1.20
H	0.004	0.007	0.11	0.19
I	0.016	-	0.40	-
J	-	0.004	-	0.10
K	0.010	0.014	0.25	0.35

SOT-26 (REV: R1)



- Lead Code:
- 1) TR1 Emitter
 - 2) TR1 Base
 - 3) TR2 Collector
 - 4) TR2 Emitter
 - 5) TR2 Base
 - 6) TR1 Collector

R1