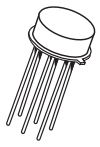
MD3250 MD3250A
MD3251 MD3251A

DUAL PNP
SILICON TRANSISTOR



TO-78 CASE

Central™
Semiconductor Corp.

DESCRIPTION:
The CENTRAL SEMICONDUCTOR MD3250 and MD3251 Series types are dual PNP silicon transistors, manufactured by the epitaxial planar process utilizing two individual chips mounted in a hermetically sealed metal case, designed for differential amplifier applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Collector-Emitter Voltage	V_{CEO}	40	V
Collector-Base Voltage	V_{CBO}	50	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Continuous Collector Current	I_C	50	mA
Power Dissipation (One Die)	P_D	575	mW
Power Dissipation (Both Die)	P_D	625	mW
Power Dissipation (One Die), T_C=25°C	P_D	1.8	W
Power Dissipation (Both Die), T_C=25°C	P_D	2.5	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200	°C

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

SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=40V		10	nA
I_{CBO}	V_{CB}=40V, T_A=150°C		10	µA
I_{EBO}	V_{BE}=3.0V		10	nA
BV_{CEO}	I_C=10mA	40		V
BV_{CBO}	I_C=10µA	50		V
BV_{EBO}	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		0.50	V
$V_{BE(SAT)}$	I_C=10mA, I_B=1.0mA	0.60	0.90	V
$V_{BE(SAT)}$	I_C=50mA, I_B=5.0mA		1.2	V
h_{FE}	V_{CE}=5.0V, I_C=10µA (MD3250,A)	25		
h_{FE}	V_{CE}=5.0V, I_C=10µA (MD3251,A)	50		
h_{FE}	V_{CE}=5.0V, I_C=100µA (MD3250,A)	50	150	
h_{FE}	V_{CE}=5.0V, I_C=100µA (MD3251,A)	80	300	
h_{FE}	V_{CE}=5.0V, I_C=1.0mA (MD3250,A)	50	150	
h_{FE}	V_{CE}=5.0V, I_C=1.0mA (MD3251,A)	100	300	
h_{FE}	V_{CE}=5.0V, I_C=10mA (MD3250,A)	50		
h_{FE}	V_{CE}=5.0V, I_C=10mA (MD3251,A)	100		

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

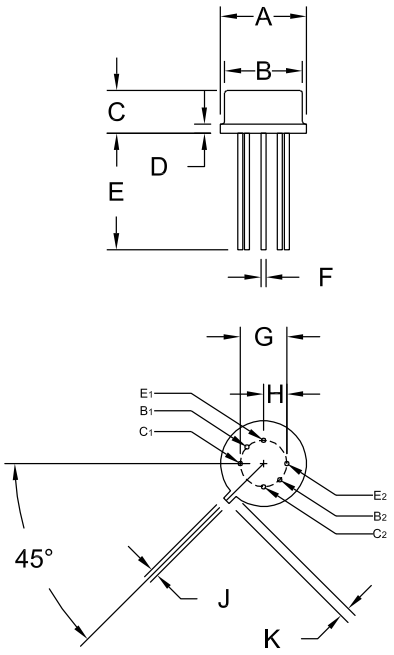
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
h_{FE}	V_{CE}=5.0V, I_C=50mA (MD3250,A)	15		
h_{FE}	V_{CE}=5.0V, I_C=50mA (MD3251,A)	30		
f_T	V_{CE}=20V, I_C=10mA, f=100MHz (MD3250,A)	200		MHz
f_T	V_{CE}=20V, I_C=10mA, f=100MHz (MD3251,A)	250		MHz
C_{ob}	V_{CB}=5.0V, I_E=0, f=100kHz		6.0	pF
C_{ib}	V_{BE}=1.0V, I_C=0, f=100kHz		8.0	pF

MATCHING CHARACTERISTICS:

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
h_{FE1}/h_{FE2} (Note 1)	V_{CE}=5.0V, I_C=100µA	0.90	1.0	
h_{FE1}/h_{FE2} (Note 1)	V_{CE}=5.0V, I_C=1.0mA	0.90	1.0	
$\lvert V_{BE1}-V_{BE2}\rvert$	V_{CE}=5.0V, I_C=10µA		5.0	mV
$\lvert V_{BE1}-V_{BE2}\rvert$	V_{CE}=5.0V, I_C=100µA		3.0	mV
$\lvert V_{BE1}-V_{BE2}\rvert$	V_{CE}=5.0V, I_C=10mA		5.0	mV

1) The lowest h_{FE} reading is taken as h_{FE1}.

TO-78 CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A (DIA)	0.335	0.370	8.51	9.40
B (DIA)	0.305	0.335	7.75	8.51
C	0.150	0.185	3.81	4.70
D	-	0.040	-	1.02
E	0.500	-	12.70	-
F (DIA)	0.016	0.021	0.41	0.53
G	0.200		5.08	
H	0.100		2.54	
J	0.028	0.034	0.71	0.86
K	0.029	0.045	0.74	1.14

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MARKING: FULL PART NUMBER

R1

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