

CentralTM Semiconductor Corp.

145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

MD8001
MD8002
MD8003

NPN SILICON DUAL TRANSISTOR

JEDEC TO-78 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR MD8001 series types are silicon NPN dual transistors manufactured by the epitaxial planar process utilizing 2 individual chips mounted in a hermetically sealed metal case designed for differential amplifier applications.

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

	SYMBOL	MD8001	MD8002	MD8003	UNIT
Collector-Emitter Voltage	V _{CEO}	40	50	60	V
Collector Current	I _C		30		mA
Power Dissipation (one die)	P _D		575		mW
Power Dissipation (both dice)	P _D		625		mW
Power Dissipation (one die, T _C =25°C)	P _D		1.8		W
Power Dissipation (both dice, T _C =25°C)	P _D		2.5		W
Operating and Storage Junction Temperature	T _J , STG	-65 TO +200			°C
Thermal Resistance (one die)	θ _{JA}		0.30		°C/mW
Thermal Resistance (both dice)	θ _{JA}		0.28		°C/mW
Thermal Resistance (one die)	θ _{JC}		97.2		°C/W
Thermal Resistance (both dice)	θ _{JC}		70		°C/W

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
I _{CBO}	V _{CB} =40V		50	nA
I _{EBO}	V _{EB} =4.0V		50	nA
BV _{CEO}	I _C =10mA (MD8001)	40		V
BV _{CEO}	I _C =10mA (MD8002)	50		V
BV _{CEO}	I _C =10mA (MD8003)	60		V
h _{FE}	V _{CE} =10V, I _C =1.0mA	100		
f _T	V _{CE} =10V, I _C =5.0mA, f=100MHz	240 TYP		MHz
C _{ob}	V _{CB} =10V, I _E =0, f=100kHz	20 TYP		pF
C _{ib}	V _{EB} =2.0V, I _C =0, f=100kHz	1.9 TYP		pF
V _{BE1} - V _{BE2}	V _{CE} =10V, I _C =1.0mA		15	mV