

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

MD918
MD918A
MD918B

NPN DUAL
SILICON TRANSISTOR

JEDEC TO-78 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR MD918 Series types are Silicon NPN Planar Epitaxial Dual Transistors designed for dual amplifier applications.

MAXIMUM RATINGS (T_A=25°C)

	<u>SYMBOL</u>		<u>UNITS</u>	
Collector-Base Voltage	V _{CBO}	30	V	
Collector-Emitter Voltage	V _{CEO}	15	V	
Emitter-Base Voltage	V _{EBO}	3.0	V	
Collector Current	I _C	50	mA	
Operating and Storage Junction Temperature	T _J , T _{stg}	-65 to +200	°C	
		<u>EACH TRANSISTOR</u>	<u>TOTAL PACKAGE</u>	
Power Dissipation	P _D	550	600	mW
Power Dissipation (T _C =25°C)	P _D	1.4	2.0	W
Thermal Resistance	Θ _{JA}	318	292	°C/W
Thermal Resistance	Θ _{JC}	125	87.5	°C/W

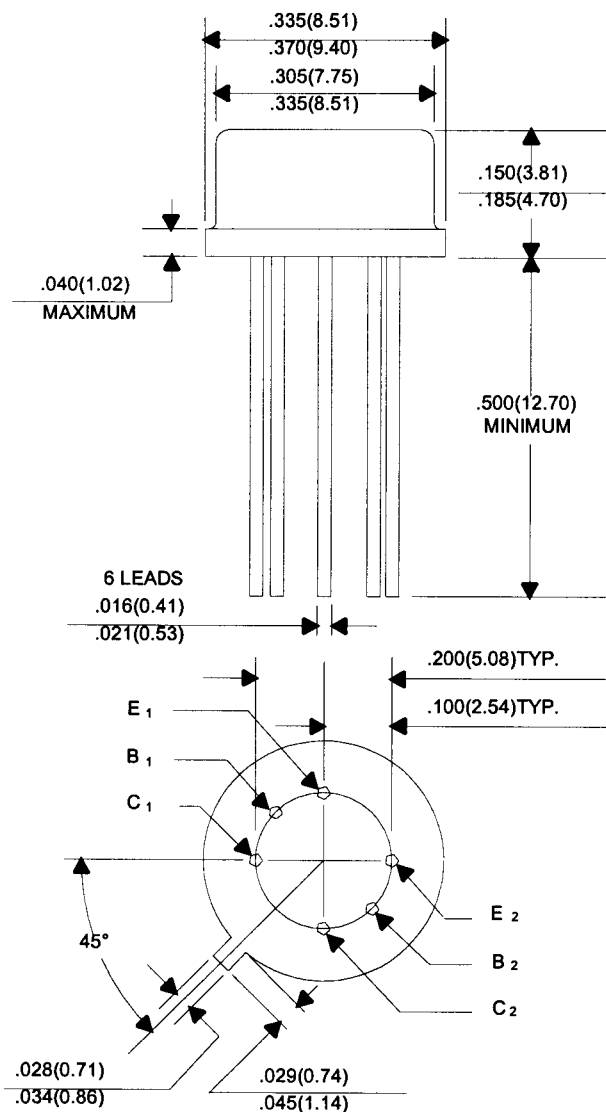
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I _{CBO}	V _{CB} =15V		10	nA
I _{CBO}	V _{CB} =15V, T _A =150°C		1.0	μA
BV _{CB0}	I _C =1.0μA	30		V
BV _{CEO}	I _C =3.0mA	15		V
BV _{EBO}	I _E =10μA	3.0		V
V _{CE(SAT)}	I _C =10mA, I _C =1.0mA		0.2	V
V _{BE(SAT)}	I _B =10mA, I _C =1.0mA		0.9	V
h _{FE}	V _{CE} =5.0V, I _C =3.0mA	50		
f _T	V _{CE} =10V, I _C =4.0mA, f=100MHz	600		MHz
C _{ob}	V _{CB} =10V, I _E =0, f=100kHz		1.7	pF
C _{ib}	V _{BE} =0.5V, I _C =0, f=100kHz		2.0	pF
NF	V _{CE} =6.0V, I _C =1.0mA, R _S =400Ω, f=60MHz		6.0	dB

ELECTRICAL CHARACTERISTICS (Continued)

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
h_{FE1}/h_{FE2}	$V_{CE}=5.0V, I_C=1.0mA$ (MD918A)	0.9	1.0	
h_{FE1}/h_{FE2}	$V_{CE}=5.0V, I_C=1.0mA$ (MD918B)	0.8	1.0	
$ V_{BE1}-V_{BE2} $	$V_{CE}=5.0V, I_C=1.0mA$ (MD918A)		5.0	mV
$ V_{BE1}-V_{BE2} $	$V_{CE}=5.0V, I_C=1.0mA$ (MD918B)		10	mV
$\Delta V_{BE1}-V_{BE2} /\Delta T_A$	$V_{CE}=5.0V, I_C=1.0mA, T_A=-55$ to $+125^{\circ}C$ (MD918A)		10	$\mu V/^{\circ}C$
$\Delta V_{BE1}-V_{BE2} /\Delta T_A$	$V_{CE}=5.0V, I_C=1.0mA, T_A=-55$ to $+125^{\circ}C$ (MD918B)		20	$\mu V/^{\circ}C$

JEDEC TO-78 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

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