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MD918
MD918A
MD918B

NPN DUAL SILICON TRANSISTOR

JEDEC TO-78 CASE

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

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

	SYMBOL		UNITS
Collector-Base Voltage	V_{CB0}	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	$^\circ\text{C}$
		EACH TRANSISTOR	TOTAL PACKAGE
Power Dissipation	P_D	550	600 mW
Power Dissipation ($T_C=25^\circ\text{C}$)	P_D	1.4	2.0 W
Thermal Resistance	θ_{JA}	318	292 $^\circ\text{C/W}$
Thermal Resistance	θ_{JC}	125	87.5 $^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=15\text{V}$		10	nA
I_{CBO}	$V_{CB}=15\text{V}, T_A=150^\circ\text{C}$		1.0	μA
BV_{CBO}	$I_C=1.0\mu\text{A}$	30		V
BV_{CEO}	$I_C=3.0\text{mA}$	15		V
BV_{EBO}	$I_E=10\mu\text{A}$	3.0		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.2	V
$V_{BE(SAT)}$	$I_B=10\text{mA}, I_C=1.0\text{mA}$		0.9	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=3.0\text{mA}$	50		
f_T	$V_{CE}=10\text{V}, I_C=4.0\text{mA}, f=100\text{MHz}$	600		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$		1.7	pF
C_{ib}	$V_{BE}=0.5\text{V}, I_C=0, f=100\text{kHz}$		2.0	pF
NF	$V_{CE}=6.0\text{V}, I_C=1.0\text{mA}, R_S=400\Omega, f=60\text{MHz}$		6.0	dB



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

ELECTRICAL CHARACTERISTICS (Continued)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
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

