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Manufacturers of World Class Discrete Semiconductors

2N2917

NPN SILICON
DUAL TRANSISTOR

JEDEC TO-78 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N2917 is a silicon NPN dual transistor utilizing two individual chips mounted in a hermetically sealed metal case designed for differential amplifier applications.

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

	SYMBOL		UNITS
Collector-Base Voltage	V _{CBO}	45	V
Collector-Emitter Voltage	V _{CEO}	45	V
Emitter-Base Voltage	V _{EBO}	6.0	V
Collector Current	I _C	30	mA
Power Dissipation (One Die)	P _D	300	mW
Power Dissipation (Both Dice)	P _D	500	mW
Power Dissipation (One Die, T _C =25°C)	P _D	750	mW
Power Dissipation (Both Dice, T _C =25°C)	P _D	1500	mW
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} =45V		10	nA
I _{CEO}	V _{CE} =45V		2.0	nA
I _{EBO}	V _{EB} =5.0V		2.0	nA
BV _{CBO}	I _C =10μA	45		V
BV _{CEO}	I _C =10mA	45		V
BV _{EBO}	I _E =10μA	6.0		V
V _{CE(s)}	I _C =1.0mA, I _B =0.1mA		0.35	V
V _{BE(ON)}	V _{CE} =5.0V, I _C =100μA		0.7	V
h _{FE}	V _{CE} =5.0V, I _C =10μA	60	240	
h _{FE}	V _{CE} =5.0V, I _C =10μA, T _A =-55°C	15		
h _{FE}	V _{CE} =5.0V, I _C =100μA	100		
h _{FE}	V _{CE} =5.0V, I _C =1.0mA	150		
f _T	V _{CE} =5.0V, I _C =500μA, f=20MHz	60		Mhz

(OVER)

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
C_{ob}	$V_{CB}=5.0\text{V}$, $I_E=0$, $f=140\text{kHz}$		6.0	pF
NF	$V_{CE}=5.0\text{V}$, $I_C=10\mu\text{A}$, $R_S=10\text{k}\Omega$, $f=1.0\text{kHz}$, $BW=200\text{Hz}$		4.0	dB
h_{FE1}/h_{FE2}	$V_{CE}=5.0\text{V}$, $I_C=100\mu\text{A}$	0.8	1.0	
$ V_{BE1}-V_{BE2} $	$V_{CE}=5.0\text{V}$, $I_C=10\mu\text{A}$		10	mV
$ V_{BE1}-V_{BE2} $	$V_{CE}=5.0\text{V}$, $I_C=100\mu\text{A}$		5.0	mV
$ V_{BE1}-V_{BE2} $	$V_{CE}=5.0\text{V}$, $I_C=1.0\text{mA}$		10	mV
$\Delta(V_{BE1}-V_{BE2})$	$V_{CE}=5.0\text{V}$, $I_C=100\mu\text{A}$, $T_A=-55^{\circ}\text{C}$ to $+25^{\circ}\text{C}$		1.6	mV
$\Delta(V_{BE1}-V_{BE2})$	$V_{CE}=5.0\text{V}$, $I_C=100\mu\text{A}$, $T_A=+25^{\circ}\text{C}$ to $+125^{\circ}\text{C}$		2.0	mV

TO-78 MECHANICAL OUTLINE

All Dimensions in inches (mm).

