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Manufacturers of World Class Discrete Semiconductors

2N4912

NPN SILICON POWER TRANSISTOR

JEDEC TO-66 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4912 is an NPN silicon power transistor manufactured by the epitaxial base process, mounted in a hermetically sealed metal case designed for general purpose switching and amplifier applications.

MAXIMUM RATINGS ($T_C=25^\circ\text{C}$ unless otherwise noted)

	SYMBOL		UNIT
Collector-Base Voltage	V_{CB0}	80	V
Collector-Emitter Voltage	V_{CE0}	80	V
Emitter-Base Voltage	V_{EB0}	5.0	V
Collector Current	I_C	1.0	A
Base Current	I_B	1.0	A
Power Dissipation	P_D	25	W
Operating and Storage			
Junction Temperature	T_J, T_{STG}	-65 to +200	$^\circ\text{C}$
Thermal Resistance	θ_{JC}	7.0	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
I_{CB0}	$V_{CB}=\text{Rated } V_{CB0}$		0.1	mA
I_{CE0}	$V_{CE}=40\text{V}$		0.5	mA
I_{CEV}	$V_{CE}=80\text{V}, V_{EB}(\text{OFF})=1.5\text{V}$		0.1	mA
I_{CEV}	$V_{CE}=80\text{V}, V_{EB}(\text{OFF})=1.5\text{V}, T_C=150^\circ\text{C}$		1.0	mA
I_{EB0}	$V_{EB}=5.0\text{V}$		1.0	mA
BV_{CE0}	$I_C=0.1\text{mA}$	80		V
$V_{CE}(\text{SAT})$	$I_C=1.0\text{A}, I_B=0.1\text{A}$		0.6	V
$V_{BE}(\text{SAT})$	$I_C=1.0\text{A}, I_B=0.1\text{A}$		1.3	V
$V_{BE}(\text{ON})$	$V_{CE}=1.0\text{V}, I_C=1.0\text{A}$		1.3	V
h_{FE}	$V_{CE}=1.0\text{V}, I_C=50\text{mA}$	40	-	
h_{FE}	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$	20	100	
h_{FE}	$V_{CE}=1.0\text{V}, I_C=1.0\text{A}$	10	-	
h_{fe}	$V_{CE}=10\text{V}, I_C=250\text{mA}, f=1.0\text{kHz}$	25	-	
f_T	$V_{CE}=10\text{V}, I_C=250\text{mA}, f=1.0\text{MHz}$	3.0	-	MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$		100	pF