

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N4264

NPN SILICON TRANSISTOR

JEDEC TO-92 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4264 type is a Silicon NPN Transistors designed for high speed switching applications.

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

	<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}	6.0	V
Collector Current	I_C	200	mA
Power Dissipation	P_D	625	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$
Thermal Resistance	θ_{JA}	200	$^\circ\text{C/W}$

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
I_{CEV}	$V_{CE} = 12\text{V}, V_{BE(OFF)} = 0.25\text{V}$		0.1	μA
I_{CEV}	$V_{CE} = 12\text{V}, V_{BE(OFF)} = 0.25\text{V}, T_A = 100^\circ\text{C}$		10	μA
BV_{CEO}	$I_C = 1.0\text{mA}$	15		V
BV_{CBO}	$I_C = 10\mu\text{A}$	20		V
BV_{EBO}	$I_E = 10\mu\text{A}$	6.0		V
$V_{CE(SAT)}$	$I_C = 10\text{mA}, I_B = 1.0\text{mA}$		0.22	V
$V_{CE(SAT)}$	$I_C = 100\text{mA}, I_B = 10\text{mA}$		0.35	V
$V_{BE(SAT)}$	$I_C = 10\text{mA}, I_B = 1.0\text{mA}$	0.65	0.80	V
$V_{BE(SAT)}$	$I_C = 100\text{mA}, I_B = 10\text{mA}$	0.75	0.95	V
h_{FE}	$V_{CE} = 1.0\text{V}, I_C = 1.0\text{mA}$	25		-
h_{FE}	$V_{CE} = 1.0\text{V}, I_C = 10\text{mA}$	40	160	-
h_{FE}	$V_{CE} = 1.0\text{V}, I_C = 30\text{mA}$	40		-
h_{FE}	$V_{CE} = 1.0\text{V}, I_C = 100\text{mA}$	30		-
h_{FE}	$V_{CE} = 1.0\text{V}, I_C = 200\text{mA}$	20		-
f_T	$V_{CE} = 10\text{V}, I_C = 10\text{mA}, f = 100\text{MHz}$	350		MHz
C_{ib}	$V_{BE} = 0.5\text{V}, I_C = 0, f = 1.0\text{MHz}$		8.0	pF
C_{ob}	$V_{CB} = 5.0\text{V}, I_E = 0, f = 1.0\text{MHz}$		4.0	pF

(Continued on Reverse Side)

ELECTRICAL CHARACTERISTICS (Continued)

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
t_d	$V_{CC} = 10V, V_{BE(OFF)} = 2.0V, I_C = 100mA, I_{B1} = 10mA$		8.0	ns
t_r	$V_{CC} = 10V, V_{BE(OFF)} = 2.0V, I_C = 100mA, I_{B1} = 10mA$		15	ns
t_s	$V_{CC} = 10V, I_C = 10mA, I_{B1} = I_{B2} = 10mA$		20	ns
t_f	$V_{CC} = 10V, I_C = 100mA, I_{B1} = I_{B2} = 10mA$		15	ns
t_{on}	$V_{CC} = 3.0V, V_{BE(OFF)} = 1.5V, I_C = 10mA, I_{B1} = 3.0mA$		25	ns
t_{off}	$V_{CC} = 3.0V, I_C = 10mA, I_{B1} = 3.0mA, I_{B2} = 1.5mA$		35	ns
Q_T	$V_{CC} = 3.0V, I_C = 10mA, I_B = 1.0mA$		80	pC

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