

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N5771  
PN5910

2N5910

JEDEC TO-92

JEDEC TO-106

PNP SILICON SWITCHING TRANSISTORS

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5771, 2N/PN5910 Series types are Silicon PNP Transistors designed for ultra high speed switching applications.

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

	SYMBOL	2N5771	2N/PN5910	UNIT
Collector-Base Voltage	$V_{CB0}$	15	-	V
Collector-Emitter Voltage	$V_{CES}$	-	20	V
Collector-Emitter Voltage	$V_{CEO}$	15	20	V
Emitter-Base Voltage	$V_{EBO}$	4.5	4.5	V
Collector Current	$I_C$	50	50	mA
		<u>2N5771/PN5910</u>	<u>2N5910</u>	
Power Dissipation	$P_D$	625	310	mW
Operating and Storage				
Junction Temperature	$T_J, T_{stg}$	-65 TO +150		$^{\circ}\text{C}$

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

SYMBOL	TEST CONDITIONS	2N5771		2N/PN5910		UNIT
		MIN	MAX	MIN	MAX	
$I_{CB0}$	$V_{CB}=8.0\text{V}$		10	-		nA
$I_{CES}$	$V_{CE}=8.0\text{V}$		10	-		nA
$I_{CES}$	$V_{CE}=10\text{V}$		-	10		nA
$I_{EBO}$	$V_{EB}=4.5\text{V}$		1.0	-		$\mu\text{A}$
$I_{EBO}$	$V_{EB}=4.0\text{V}$		-	100		$\mu\text{A}$
$I_B$	$V_{CE}=6.0\text{V}, V_{EB}=0$		-	10		nA
$BV_{CB0}$	$I_C=100\mu\text{A}$	15		20		V
$BV_{CES}$	$I_C=100\mu\text{A}$	15		20		V
$BV_{CEO}$	$I_C=3.0\text{mA}$	15		20		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	4.5		4.5		V
$V_{CE}(\text{SAT})$	$I_C=1.0\text{mA}, I_B=0.1\text{mA}$		0.15	-		V
$V_{CE}(\text{SAT})$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.18	0.15		V
$V_{CE}(\text{SAT})$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.6	0.5		V
$V_{BE}(\text{SAT})$	$I_C=1.0\text{mA}, I_B=0.1\text{mA}$		0.8	-		V
$V_{BE}(\text{SAT})$	$I_C=10\text{mA}, I_B=1.0\text{mA}$	0.8	0.95	0.75	0.95	V
$V_{BE}(\text{SAT})$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		1.5	1.5		V
$h_{FE}$	$V_{CE}=0.5\text{V}, I_C=1.0\text{mA}$	35		15		-
$h_{FE}$	$V_{CE}=0.3\text{V}, I_C=10\text{mA}$	50	120	30	120	-
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=50\text{mA}$	40		30		-
$f_T$	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	850		700		MHz
$C_{cb}$	$V_{CB}=5.0\text{V}, f=140\text{kHz}$		3.0		3.0	pF
$C_{eb}$	$V_{EB}=0.5\text{V}, f=140\text{kHz}$		3.5		3.5	pF
$t_{on}$	$I_C=10\text{mA}, I_{B1}=1.0\text{mA}$		15		15	ns
$t_{off}$	$I_C=10\text{mA}, I_{B1}=I_{B2}=1.0\text{mA}$		20		20	ns
$\tau_s$	$I_C=10\text{mA}, I_{B1}=I_{B2}=10\text{mA}$		20		20	ns