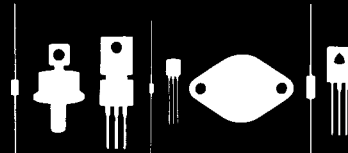


Central
Semiconductor Corp.

**Central
Semiconductor Corp.**
**Central™
Semiconductor Corp.**

145 Adams Avenue
Hauppauge, New York 11788



2N3641 PN3641
2N3642 PN3642
2N3643 PN3643

JEDEC TO-105 JEDEC TO-92

NPN SILICON SIGNAL TRANSISTORS

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N3641, PN3641 Series types are Silicon NPN Small Signal Transistors designed for general purpose amplifier applications.

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

	<u>SYMBOL</u>	<u>2N3641 2N3643 PN3641 PN3643</u>	<u>2N3642 PN3642</u>	<u>UNIT</u>
Collector-Base Voltage	V_{CB0}	60	60	V
Collector-Emitter Voltage	V_{CE0}	30	45	V
Emitter-Base Voltage	V_{EB0}	5.0	5.0	V
Collector Current	I_C	500	500	mA
		<u>2N3641 2N3642 2N3643</u>	<u>PN3641 PN3642 PN4643</u>	
Power Dissipation Operating and Storage Junction Temperature	P_D T_J, T_{stg}	350 -55 TO $^{+}125$	625 -55 TO $^{+}150$	mW $^{\circ}\text{C}$

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>2N3641 PN3641 MIN MAX</u>	<u>2N3642 PN3642 MIN MAX</u>	<u>2N3643 PN3643 MIN MAX</u>	<u>UNIT</u>
I_{CES}	$V_{CE}=50\text{V}$		50	50	nA
BV_{CB0}	$I_C=10\mu\text{A}$	60	60	60	V
BV_{CES}	$I_C=10\mu\text{A}$	60	60	60	V
BV_{CE0}	$I_C=10\text{mA}$	30	45	30	V
BV_{EB0}	$I_E=10\mu\text{A}$	5.0	5.0	5.0	V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.22	0.22	0.22 V
h_{FE}	$V_{CE}=10\text{V}, I_C=150\text{mA}$	40	120	40	120
h_{FE}	$V_{CE}=10\text{V}, I_C=500\text{mA}$	15	15	25	300
f_T	$V_{CE}=5.0\text{V}, I_C=50\text{mA}, f=100\text{MHz}$	150	150	250	MHz
C_{ob}	$V_{CB}=10\text{V}, f=140\text{kHz}$		8.0	8.0	8.0 pF
G_{pe}	$V_{CE}=15\text{V}, R_G=140\Omega, R_L=260\Omega, f=30\text{MHz}, P_{IN}=40\text{mW}$	10	10	10	dB
η	$V_{CE}=15\text{V}, R_G=140\Omega, R_L=260\Omega, f=30\text{MHz}, P_{IN}=40\text{mW}$	60	60	60	%
t_{on}	$I_C=300\text{mA}, I_{B1}=30\text{mA}$		60	60	60 ns
t_{off}	$I_C=300\text{mA}, I_{B1}=I_{B2}=30\text{mA}$		150	150	150 ns

145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824