

# New Jersey Semi-Conductor Products, Inc.

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2N3641 PN3641  
2N3642 PN3642  
2N3643 PN3643

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JEDEC TO-105 JEDEC TO-92  
NPN SILICON SIGNAL TRANSISTORS

## MAXIMUM RATINGS (T<sub>A</sub>=25°C)

	SYMBOL	2N3641	2N3642	UNIT
		2N3643	PN3642	
Collector-Base Voltage	V <sub>CB0</sub>	60	60	V
Collector-Emitter Voltage	V <sub>CE0</sub>	30	45	V
Emitter-Base Voltage	V <sub>EB0</sub>	5.0	5.0	V
Collector Current	I <sub>C</sub>	500	500	mA
		2N3641	PN3641	
		2N3642	PN3642	
		2N3643	PN4643	
Power Dissipation	P <sub>D</sub>	350	625	mW
Operating and Storage	T <sub>J</sub> , T <sub>stg</sub>	-55 TO +125	-55 TO +150	°C

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C)

SYMBOL	TEST CONDITIONS	2N3641	2N3642	2N3643	UNIT
		PN3641	PN3642	PN3643	
I <sub>CES</sub>	V <sub>CE</sub> =50V		50	50	nA
BV <sub>CB0</sub>	I <sub>C</sub> =10μA	60		60	V
BV <sub>CES</sub>	I <sub>C</sub> =10μA	60		60	V
BV <sub>CEO</sub>	I <sub>C</sub> =10mA	30		30	V
BV <sub>EB0</sub>	I <sub>E</sub> =10μA	5.0		5.0	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA		0.22	0.22	V
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =150mA	40	120	100	300
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =500mA	15		25	
f <sub>T</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =50mA, f=100MHz	150		150	MHz
C <sub>ob</sub>	V <sub>CB</sub> =10V, f=140kHz		8.0	8.0	pF
G <sub>pe</sub>	V <sub>CE</sub> =15V, R <sub>G</sub> =140Ω, R <sub>L</sub> =260Ω, f=30MHz, P <sub>IN</sub> =40mW	10		10	dB
n	V <sub>CE</sub> =15V, R <sub>G</sub> =140Ω, R <sub>L</sub> =260Ω, f=30MHz, P <sub>IN</sub> =40mW	60		60	%
t <sub>on</sub>	I <sub>C</sub> =300mA, I <sub>B1</sub> =30mA		60	60	ns
t <sub>off</sub>	I <sub>C</sub> =300mA, I <sub>B1</sub> =I <sub>B2</sub> =30mA		150	150	ns



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