

# New Jersey Semi-Conductor Products, Inc.

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2N5632 2N5633 2N5634 NPN  
2N6229 2N6230 2N6231 PNP

## COMPLEMENTARY SILICON POWER TRANSISTORS

JEDEC TO-3 CASE

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

	SYMBOL	2N5632 2N6229	2N5633 2N6230	2N5634 2N6231	UNIT
Collector-Base Voltage	$V_{CB0}$	100	120	140	V
Collector-Emitter Voltage	$V_{CE0}$	100	120	140	V
Emitter-Base Voltage	$V_{EB0}$	7.0	7.0	7.0	V
Collector Current	$I_C$	10	10	10	A
Collector Current (Peak)	$I_{CM}$	15	15	15	A
Base Current	$I_B$	5.0	5.0	5.0	A
Power Dissipation	$P_D$	150	150	150	W
Operating and Storage Junction Temperature	$T_J, T_{STG}$	-65 TO +200			$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$	1.17			$^\circ\text{C}/\text{W}$

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

SYMBOL	TEST CONDITIONS	2N5632 2N6229		2N5633 2N6230		2N5634 2N6231		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	
$I_{CBO}$	$V_{CB}=\text{Rated } V_{CB0}$		1.0		1.0		1.0	mA
$I_{CEV}$	$V_{CE}=\text{Rated } V_{CE0}, V_{EB}(\text{OFF})=1.5\text{V}$		1.0		1.0		1.0	mA
$I_{CEV}$	$V_{CE}=\text{Rated } V_{CE0}, V_{EB}(\text{OFF})=1.5\text{V}, T_C=150^\circ\text{C}$		5.0		5.0		5.0	mA
$I_{CEO}$	$V_{CE}=\frac{1}{2} \text{ Rated } V_{CE0}$		1.0		1.0		1.0	mA
$I_{EBO}$	$V_{BE}=7.0\text{V}$		1.0		1.0		1.0	mA
$BV_{CEO}$	$I_C=200\text{mA}$	100		120		140		V
$V_{CE}(\text{SAT})$	$I_C=7.5\text{A}, I_B=0.75\text{A}$		1.0		1.0		1.0	V
$V_{CE}(\text{SAT})$	$I_C=10\text{A}, I_B=2.0\text{A}$		2.0		2.0		2.0	V
$V_{BE}(\text{SAT})$	$I_C=7.5\text{A}, I_B=0.75\text{A}$		2.0		2.0		2.0	V
$V_{BE}(\text{ON})$	$V_{CE}=2.0\text{V}, I_C=5.0\text{A}$		1.5		1.5		1.5	V
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=5.0\text{A}$	25	100	20	80	15	60	
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=10\text{A}$	5.0		5.0		5.0		
$h_{fe}$	$V_{CE}=10\text{V}, I_C=2.0\text{A}, f=1.0\text{kHz}$	15		15		15		
$f_T$	$V_{CE}=20\text{V}, I_C=1.0\text{A}, f=0.5\text{MHz}$	1.0		1.0		1.0		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=0.1\text{MHz}$ (NPN types)		300		300		300	pF
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=0.1\text{MHz}$ (PNP types)		600		600		600	pF

NJ Semi-Conductors reserves the right to change test conditions, parameters limits and package dimensions without notice information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

**Quality Semi-Conductors**

