

New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 378-2922
(212) 227-8005
FAX: (973) 378-8960

2N5660
2N5661

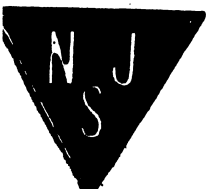
NPN
200, 300V
0.5 AMP SWITCHING

TO-66

MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$ unless otherwise noted)					
RATING	SYMBOL	2N5660	2N5661	UNIT	
Collector-Base Voltage	V_{CBO}	250	400	Volts	
Collector-Emitter Voltage	V_{CEO}	200	300	Volts	
Emitter-Base Voltage	V_{EBO}	6.0	6.0	Volts	
Collector Current—Continuous	I_C	1.0	1.0	Amps	
Base Current—Continuous	I_B	0.2	0.2	Amps	
Total Power Dissipation@ $T_c = 100^\circ\text{C}$	P_D	20	20	Watts	
Junction to Case Thermal Resistance	$R_{\theta JC}$	5.0	5.0	$^\circ\text{C/W}$	
Operating and Storage Junction Temperature Range	$T_{J(\text{oper})}$ T_{stg}	-65 to +200	-65 to +200	$^\circ\text{C}$	

ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$ unless otherwise noted)						
SYMBOL	CONDITIONS	2N5660		2N5661		Unit
		Min	Max	Min	Max	
V_{CBO}	$I_C = 1.0\text{mA}$	250	—	400	—	Volts
V_{CEO}	$I_C = 20\text{mA}$	200	—	300	—	Volts
V_{CER}	$I_C = 10\text{mA}$, $R_{BE} = 100\Omega$	250	—	400	—	Volts
I_{EBO}	$V_{EB} = 6.0\text{V}$	—	10	—	10	μA
I_{CEO}	$V_{CE} = 400\text{V}$	—	1.0	—	1.0	μA
I_{CES}	$V_{CE} = 250\text{V}$	—	1.0	—	1.0	μA
$h_{FE} \uparrow$	$V_{CE} = 5.0\text{V}$, $I_C = 1.0\text{A}$	15	—	15	—	
$h_{FE} \uparrow$	$V_{CE} = 5.0\text{V}$, $I_C = 500\text{mA}$	40	120	25	75	
$V_{CE(\text{sat})} \uparrow$	$I_C = 1.0\text{A}$, $I_B = 0.1\text{A}$	—	0.4	—	0.4	Volts
$V_{BE(\text{sat})} \uparrow$	$I_C = 1.0\text{A}$, $I_B = 0.1\text{A}$	—	1.2	—	1.2	Volts
f_T	$V_{CE} = 5.0\text{V}$, $I_C = 0.1\text{A}$, $f = 10\text{MHz}$	20	—	20	—	MHz
C_{ob}	$V_{CB} = 10\text{V}$, $f = 1\text{MHz}$	—	60	—	60	pF
SWITCHING		Typ	Max	Typ	Max	Unit
t_{on}	Resistive $V_{CC} = 100\text{V}$ $I_C = 500\text{mA}$ $I_{B1} = I_{B2} = 15\text{mA}$ $t_P = 10\mu\text{s}$	—	0.25	—	—	μs
t_{off}		—	0.85	—	—	μs
t_{on}	Resistive $V_{CC} = 100\text{V}$ $I_C = 500\text{mA}$ $I_{B1} = I_{B2} = 25\text{mA}$ $t_P = 10\mu\text{s}$	—	—	—	0.25	μs
t_{off}		—	—	—	1.2	μs

† Pulse Measurement Conditions: Length = 300 μs , Duty Cycle = 2% (measured using separate current carrying and voltage sensing leads)



NJ Semi-Conductors reserves the right to change test conditions, parameter 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.

CASE OUTLINE

