

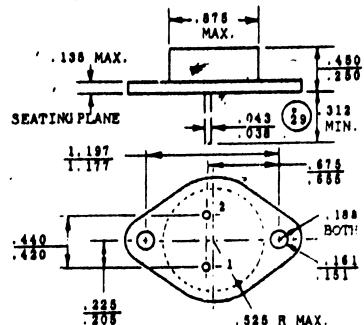
# New Jersey Semi-Conductor Products, Inc.

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

2N1651  
2N1652  
2N1653

TELEPHONE: (973) 376-2922  
(212) 227-8005  
FAX: (973) 376-8980

TO3



The 2N1651, 2N1652, and 2N1653 DAP transistors are designed for efficient high current switching at high frequencies. The diffused base gives very low input resistance and high cutoff frequency while still maintaining high breakdown voltage. The low input resistance gives better circuit stabilization at high temperatures and greatly increases the maximum available power gain. These transistors are capable of switching up to 1600 watts.

The diffused base alloy power transistors feature welded construction with a vacuum-tight seal to insure long life and stable operation.

#### Absolute Maximum Ratings:

	$V_{CE}$ Vdc	$V_{CB}$ Vdc	$V_{EB}$ Vdc	$I_C$ Adc	$P_C$ W	$T_{stg}^*$ $^{\circ}\text{C}$	$T_J$ $^{\circ}\text{C}$
2N1651	60	60	2.0	25	100	-60 to +110	110
2N1652	100	100	See				
2N1653	120	120	Page 4				

\* $P_C$  is the maximum average power dissipation. It can be exceeded during the switching time.

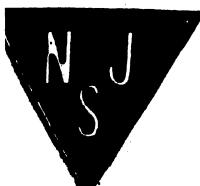
Electrical Characteristics: Mounting base temperature  $25^{\circ}\text{C}$  unless otherwise specified.

	Symb.	Min.	Max.	Units	
Current Gain $V_{CE} = -1.5 \text{ Vdc}; I_C = 25 \text{ Adc}$	$h_{FE}$	20	-	-	
Current Gain $V_{CE} = -2 \text{ Vdc}; I_C = 10 \text{ Adc}$	$h_{FE}$	35	140	-	
Collector Saturation Voltage $I_C = 25 \text{ Adc}; I_B = 2.5 \text{ Adc}$	$V_{CE}$ $V_{BE}$	-	1.0 1.5	Vdc Vdc	
Emitter-Base Voltage $I_{EBO} = 50 \text{ mA dc}; I_C = 0$	$BV_{EBO}$	1.5	-	Vdc	
Collector-Emitter Breakdown Voltage $I_C = 500 \text{ mA dc}; R_{BE} = \infty$	$BV_{CEO}$	2N1651 2N1652 2N1653	30 60 80	- - -	Vdc Vdc Vdc

#### Typical Switching Characteristics:

Switching Times	Fall Time $t_f$ 1.1	Storage Time $t_s$ 1.8	Rise Time $t_r$ 1.9	Units
Conditions:				$\mu\text{sec}$

$V_{CC}$ Vdc	$I_C$ Adc	$I_B$ (on) Adc	$I_B$ (off) Adc	$R_L$ ohms
12.5	25	2.5	-	0.5
12.5	25	-	2.5	0.5



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