

# New Jersey Semi-Conductor Products, Inc.

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

TELEPHONE: (973) 376-2922  
(212) 227-6005  
FAX: (973) 376-8960

## NPN D44H Series PNP D45H Series

### COMPLEMENTARY SILICON POWER TRANSISTORS

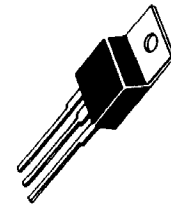
... for general purpose power amplification and switching such as output or driver stages in applications such as switching regulators, converters and power amplifiers.

- Low Collector-Emitter Saturation Voltage —  
 $V_{CE(sat)} = 1.0 \text{ V (Max) @ } 8.0 \text{ A}$
- Fast Switching Speeds
- Complementary Pairs Simplifies Designs

10 AMPERE

### COMPLEMENTARY SILICON POWER TRANSISTORS

30-80 VOLTS



### MAXIMUM RATINGS

Rating	Symbol	D44H or D45H				Unit
		1,2	4,5	7,8	10,11	
Collector-Emitter Voltage	$V_{CEO}$	30	45	60	80	Vdc
Emitter-Base Voltage	$V_{EB}$	5.0				Vdc
Collector Current — Continuous Peak (1)	$I_C$	10 20				Adc
Total Power Dissipation @ $T_C = 25^\circ\text{C}$ @ $T_A = 25^\circ\text{C}$	$P_D$	50 1.67				Watts
Operating and Storage Junction Temperature Range	$T_J$ , $T_{stg}$	-55 to 150				$^\circ\text{C}$

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	2.5	$^\circ\text{C/W}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	75	$^\circ\text{C/W}$
Maximum Lead Temperature for Soldering Purposes: 1/8" from Case for 5 Seconds	$T_L$	275	$^\circ\text{C}$

(1) Pulse Width  $\leq 6.0$  ms, Duty Cycle  $\leq 50\%$

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

Characteristic	Symbol	Min	Max	Unit
DC Current Gain ( $V_{CE} = 1.0 \text{ Vdc}$ , $I_C = 2.0 \text{ Adc}$ )	D44H1,4,7,10 D45H1,4,7,10	35	—	—
	D44H2,5,8,11 D45H2,5,8,11			
	D44H1,4,7,10 D45H1,4,7,10	20	—	

### NOTES

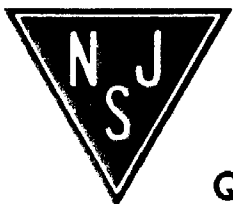
- 1 DIMENSION H APPLIES TO ALL LEADS
- 2 DIMENSION L APPLIES TO LEADS 1 AND 3
- 3 DIMENSION Z DEFINES A ZONE WHERE ALL BODY AND LEAD IRREGULARITIES ARE ALLOWED
- 4 DIMENSIONING AND TOLERANCING PER ANSI Y14.5M 1982
- 5 CONTROLLING DIMENSION INCH

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	14.60	15.75	0.575	0.620
B	9.65	10.29	0.380	0.405
C	4.06	4.82	0.160	0.190
D	0.64	0.89	0.025	0.035
F	3.61	3.73	0.142	0.147
G	2.41	2.67	0.095	0.105
H	2.79	3.93	0.110	0.155
J	0.36	0.56	0.014	0.022
K	12.70	14.27	0.500	0.562
L	1.14	1.39	0.045	0.055
N	4.83	5.33	0.190	0.210
O	2.54	3.04	0.100	0.120
R	2.04	2.79	0.080	0.110
S	1.14	1.39	0.045	0.055
T	5.97	6.48	0.235	0.255
U	0.00	1.27	0.000	0.050
V	1.14	—	0.045	—
Z	—	2.03	—	0.080

- STYLE 1:  
1. BASE  
2. COLLECTOR  
3. EMITTER  
4. COLLECTOR

(TO-220AB)

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Quality Semi-Conductors