NJD2873T4

Plastic Power Transistors

NPN Silicon DPAK For Surface Mount Applications

. . . designed for high-gain audio amplifier applications.

- High DC Current Gain -
  h_{FE} = 120 (Min) @ I_C = 500 mA
  = 40 (Min) @ I_C = 2 A
- Low Collector-Emitter Saturation Voltage -
  $V_{CE(sat)}$ = 0.3 Vdc (Max) @ I_C = 1 A
- High Current-Gain - Bandwidth Product -
  f_T = 65 MHz (Min) @ I_C = 100 mA

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Base Voltage	V_{CB}	50	Vdc
Collector-Emitter Voltage	V_{CEO}	50	Vdc
Emitter-Base Voltage	V_{EB}	5	Vdc
Collector Current — Continuous Peak	I_C	2 3	Adc
Base Current	I_B	0.4	Adc
Total Device Dissipation @ T_C = 25°C Derate above 25°C	P_D	12.5 0.1	W W/°C
Total Device Dissipation @ T_A = 25°C* Derate above 25°C	P_D	1.4 0.011	W W/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	- 65 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance — Junction to Case Junction to Ambient*	$R_{\theta JC}$ $R_{\theta JA}$	10 89.3	°C/W

*When surface mounted on minimum pad sizes recommended.

ON Semiconductor®

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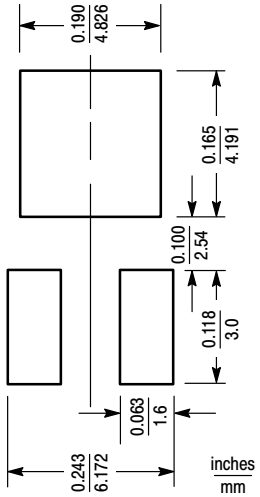
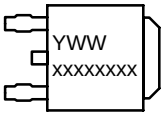
SILICON
POWER TRANSISTORS
2 A, 50 V, 12.5 W

MINIMUM PAD SIZES RECOMMENDED FOR SURFACE MOUNTED APPLICATIONS



DPAK
CASE 369A

MARKING DIAGRAM



xxxxxxxxx = Specific Device Code
Y = Year
WW = Work Week

ORDERING INFORMATION

Device	Package	Shipping
NJD2873T4	DPAK	2500 Units / Reel

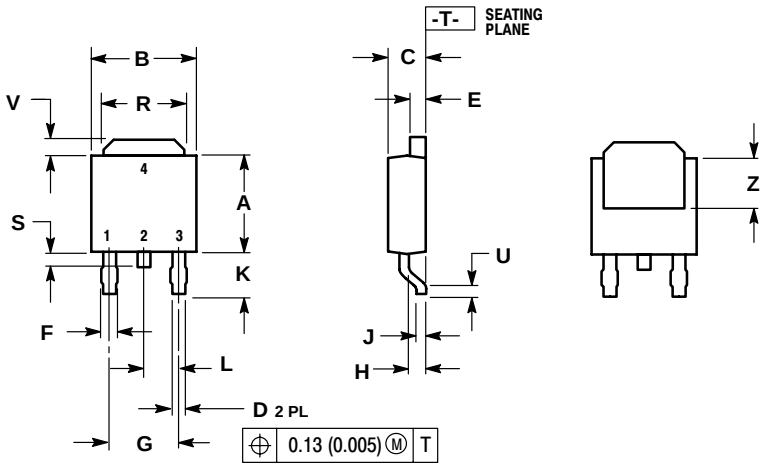
ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Sustaining Voltage (Note 1) (I_C = 10 mAdc, I_B = 0)	$V_{CEO(sus)}$	50	-	Vdc
Collector Cutoff Current (V_{CB} = 50 Vdc, I_E = 0)	I_{CBO}	-	100	nAdc
Emitter Cutoff Current (V_{BE} = 5 Vdc, I_C = 0)	I_{EBO}	-	100	nAdc
ON CHARACTERISTICS				
DC Current Gain (Note 2) (I_C = 0.5 A, V_{CE} = 2 V) (I_C = 2 Adc, V_{CE} = 2 Vdc)	h_{FE}	120 40	360 -	-
Collector-Emitter Saturation Voltage (Note 2) (I_C = 1 A, I_B = 0.05 A)	$V_{CE(sat)}$	-	0.3	Vdc
Base-Emitter Saturation Voltage (Note 1) (I_C = 1 A, I_B = 0.05 Adc)	$V_{BE(sat)}$	-	1.2	Vdc
Base-Emitter On Voltage (Note 1) (I_C = 1 Adc, V_{CE} = 2 Vdc)	$V_{BE(on)}$	-	1.2	Vdc
DYNAMIC CHARACTERISTICS				
Current-Gain - Bandwidth Product (Note 3) (I_C = 100 mAdc, V_{CE} = 10 Vdc, f_{test} = 10 MHz)	f_T	65	-	MHz
Output Capacitance (V_{CB} = 10 Vdc, I_E = 0, f = 0.1 MHz)	C_{ob}	-	80	pF

1. Pulse Test: Pulse Width = 300 μs, Duty Cycle ≈ 2%.
2. Pulse Test: Pulse Width = 300 μs, Duty Cycle ≈ 2%.
3. $f_T = |h_{fe}| \bullet f_{test}$.

PACKAGE DIMENSIONS

DPAK
CASE 369A-13
ISSUE AB



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.235	0.250	5.97	6.35
B	0.250	0.265	6.35	6.73
C	0.086	0.094	2.19	2.38
D	0.027	0.035	0.69	0.88
E	0.033	0.040	0.84	1.01
F	0.037	0.047	0.94	1.19
G	0.180 BSC		4.58 BSC	
H	0.034	0.040	0.87	1.01
J	0.018	0.023	0.46	0.58
K	0.102	0.114	2.60	2.89
L	0.090 BSC		2.29 BSC	
R	0.175	0.215	4.45	5.46
S	0.020	0.050	0.51	1.27
U	0.020	---	0.51	---
V	0.030	0.050	0.77	1.27
Z	0.138	---	3.51	---

PUBLICATION ORDERING INFORMATION

Literature Fulfillment:
Literature Distribution Center for ON Semiconductor
P.O. Box 5163, Denver, Colorado 80217 USA
Phone: 303-675-2175 or 800-344-3860 Toll Free USA/Canada
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Email: ONlit@hibbertco.com

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Sales Representative.