

# New Jersey Semi-Conductor Products, Inc.

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JEDEC Type: 2N2757, 2758, 2759, 2760, 2761, 2762,  
2N2763, 2764, 2765, 2766, 2767, 2768,  
2N2769, 2770, 2771, 2772, 2773, 2774,  
2N2775, 2776, 2777, 2778, 2779, 2780

## JOINT ELECTRON DEVICE ENGINEERING COUNCIL REGISTRATION DATA SILICON POWER TRANSISTOR POWER SWITCHING

### I. General Description

This transistor is a NPN silicon power transistor designed primarily for high power switching applications and inverters at or below the collector current given in Table I. It is intended for Industrial and Military class of service.

### II. Mechanical Data

- A. The transistor has an outline as per Figure 1
- B. Terminal location is shown in Figure 1
- C. Maximum Stud Torque 40 in. lbs. Non Lubricated.  
Minimum Stud Torque 30 in. lbs. Non Lubricated.

### III. Maximum Ratings

#### A. Temperature

- 1. Storage Temperature Range  $T_{stg}$   $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$
- 2. Operating Case Temperature Range  $T_C$   $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$

#### B. Voltage

- 1.  $V_{CEX}$  See Table I
- 2.  $V_{CBO}$  See Table I
- 3.  $V_{EBO}$  15V D.C.
- 4.  $V_{CEO}$  See Table I (Same as  $V_{CEO(sus)}$ )

#### C. Current

- 1. Continuous Collector Current - 30 a.
- 2. Continuous Base Current 7.5 Amps.

- D. 1. Maximum Continuous Power Dissipation - 200 Watts at a  $T_C$  of  $75^{\circ}\text{C}$  Max.
- 2. Linear Derating Factor  $2.0\text{W}/^{\circ}\text{C}$



Quality Semi-Conductors

| JEDEC<br>No. | Test Conditions for "Turn On" and "Turn Off"<br>Time Values |       |          |             |            |        | Turn On<br>$t_d + t_r$<br>Fig. 2<br>Max. | Turn Off<br>$t_s + t_f$<br>Fig. 2<br>Max. | $h_{fe}$ |       |             |
|--------------|-------------------------------------------------------------|-------|----------|-------------|------------|--------|------------------------------------------|-------------------------------------------|----------|-------|-------------|
|              | $I_C$                                                       | $T_C$ | $V_{CC}$ | $I_B$ (OFF) | $I_B$ (ON) | $I_C$  |                                          |                                           | $V_{CE}$ | Freq. | Min.<br>hfe |
|              |                                                             |       |          |             |            |        |                                          |                                           |          |       |             |
|              |                                                             |       |          |             |            |        |                                          |                                           |          |       |             |
| 2N2757       | 10A                                                         | 25°C  | 12V      | 1.5A        | 3A         | 10µSec | 20µSec                                   | 2.5A                                      | 12V      | 1KC   | 25          |
| 2758         | 10                                                          | 25    | 12       | 1.5         | 3          | 10     | 20                                       | 2.5                                       | 12       | 1     | 25          |
| 2759         | 10                                                          | 25    | 12       | 1.5         | 3          | 10     | 20                                       | 2.5                                       | 12       | 1     | 25          |
| 2760         | 10                                                          | 25    | 12       | 1.5         | 3          | 10     | 20                                       | 2.5                                       | 12       | 1     | 25          |
| 2761         | 10                                                          | 25    | 12       | 1.5         | 3          | 10     | 20                                       | 2.5                                       | 12       | 1     | 25          |
| 2762         | 10                                                          | 25    | 12       | 1.5         | 3          | 10     | 20                                       | 2.5                                       | 12       | 1     | 25          |
| 2N2763       | 15                                                          | 25    | 12       | 2.25        | 4.5        | 12     | 21                                       | 3.75                                      | 12       | 1     | 20          |
| 2764         | 15                                                          | 25    | 12       | 2.25        | 4.5        | 12     | 21                                       | 3.75                                      | 12       | 1     | 20          |
| 2765         | 15                                                          | 25    | 12       | 2.25        | 4.5        | 12     | 21                                       | 3.75                                      | 12       | 1     | 20          |
| 2766         | 15                                                          | 25    | 12       | 2.25        | 4.5        | 12     | 21                                       | 3.75                                      | 12       | 1     | 20          |
| 2767         | 15                                                          | 25    | 12       | 2.25        | 4.5        | 12     | 21                                       | 3.75                                      | 12       | 1     | 20          |
| 2768         | 15                                                          | 25    | 12       | 2.25        | 4.5        | 12     | 21                                       | 3.75                                      | 12       | 1     | 20          |
| 2N2769       | 20                                                          | 25    | 12       | 3.0         | 6.0        | 13     | 22                                       | 5.0                                       | 12       | 1     | 20          |
| 2770         | 20                                                          | 25    | 12       | 3.0         | 6.0        | 13     | 22                                       | 5.0                                       | 12       | 1     | 20          |
| 2771         | 20                                                          | 25    | 12       | 3.0         | 6.0        | 13     | 22                                       | 5.0                                       | 12       | 1     | 20          |
| 2772         | 20                                                          | 25    | 12       | 3.0         | 6.0        | 13     | 22                                       | 5.0                                       | 12       | 1     | 20          |
| 2773         | 20                                                          | 25    | 12       | 3.0         | 6.0        | 13     | 22                                       | 5.0                                       | 12       | 1     | 20          |
| 2774         | 20                                                          | 25    | 12       | 3.0         | 6.0        | 13     | 22                                       | 5.0                                       | 12       | 1     | 20          |
| 2N2775       | 25                                                          | 25    | 12       | 3.75        | 7.5        | 14     | 23                                       | 6.25                                      | 12       | 1     | 20          |
| 2776         | 25                                                          | 25    | 12       | 3.75        | 7.5        | 14     | 23                                       | 6.25                                      | 12       | 1     | 20          |
| 2777         | 25                                                          | 25    | 12       | 3.75        | 7.5        | 14     | 23                                       | 6.25                                      | 12       | 1     | 20          |
| 2778         | 25                                                          | 25    | 12       | 3.75        | 7.5        | 14     | 23                                       | 6.25                                      | 12       | 1     | 20          |
| 2779         | 25                                                          | 25    | 12       | 3.75        | 7.5        | 14     | 23                                       | 6.25                                      | 12       | 1     | 20          |
| 2780         | 25                                                          | 25    | 12       | 3.75        | 7.5        | 14     | 23                                       | 6.25                                      | 12       | 1     | 20          |



Figure 2

Angular orientation and shape of terminals is undefined. Square or radius on ends of terminals is optional.

