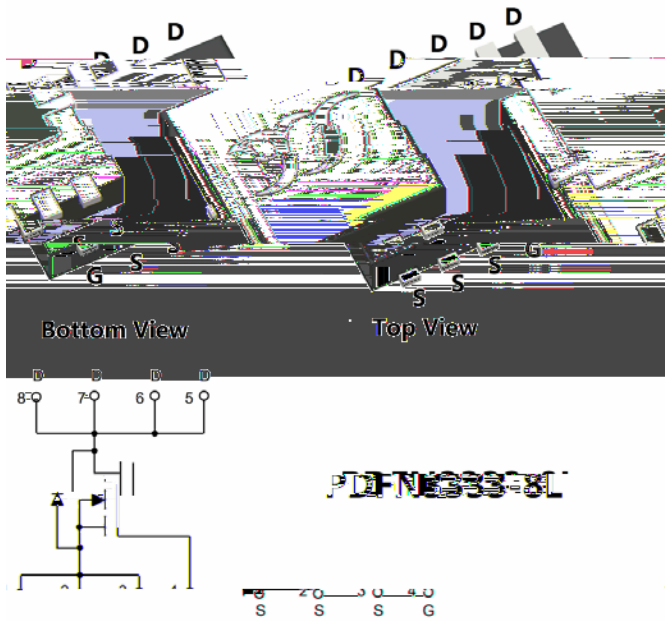




# YJQ4D8G04HQ

RoHS  
COMPLIANT

100% V



ds Tested

## General Description

- Excellent package fo

|                                         |                                                |                                |          |          | Unit |     |    |
|-----------------------------------------|------------------------------------------------|--------------------------------|----------|----------|------|-----|----|
| Drain-source Voltage                    |                                                |                                | $V_{DS}$ | 40       | V    |     |    |
| Gate-source Voltage                     |                                                |                                | $V_{GS}$ | ±20      | V    |     |    |
| Continuous Drain Current<br>(Note 1,2 ) | Steady-State                                   | $T_A=25 \quad , V_{GS}= 10V$   | $I_D$    | 16.9     | A    |     |    |
|                                         |                                                | $T_A=100 \quad , V_{GS}= 10V$  |          | 11.9     |      |     |    |
| Continuous Drain Current<br>(Note 1,3 ) | Steady-State                                   | $T_C=25 \quad , V_{GS}= 10V$   |          | 75       |      |     |    |
|                                         |                                                | $T_C =100 \quad , V_{GS}= 10V$ |          | 53       |      |     |    |
| Pulsed Drain Current                    | $T_C=25 \quad , t =100\mu s$                   |                                |          | $I_{DM}$ |      | 250 | A  |
| Avalanche energy                        | $V_G=10V, R_G=25\Omega, L=0.5mH, I_{AS}=14.7A$ |                                |          | EAS      |      | 54  | mJ |
| Total Power Dissipation<br>(Note 1,2)   | Steady-State                                   | $T_A=25$                       | $P_D$    | 2.3      | W    |     |    |
|                                         |                                                | $T_A=100$                      |          | 1.1      |      |     |    |

|  |              |          |  |
|--|--------------|----------|--|
|  | $J, T_{STG}$ | -55 +175 |  |
|--|--------------|----------|--|

## Thermal resistance

| Parameter | Symbol | Typ |
|-----------|--------|-----|
|-----------|--------|-----|

|             |    | Marking | MINIMUM<br>PACKAGE(pcs) | INNER BOX<br>QUANTITY(pcs) | OUTER CARTON<br>QUANTITY(pcs) | DELIVERY<br>MODE |
|-------------|----|---------|-------------------------|----------------------------|-------------------------------|------------------|
| YJQ4D8G04HQ | F1 | Q4D8G04 | 5000                    | 10000                      | 100000                        | 13" reel         |

YJQ4D8G04HQ

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# YJQ4D8G04HQ

## ■ Typical Electrical and Thermal Characteristics Diagrams

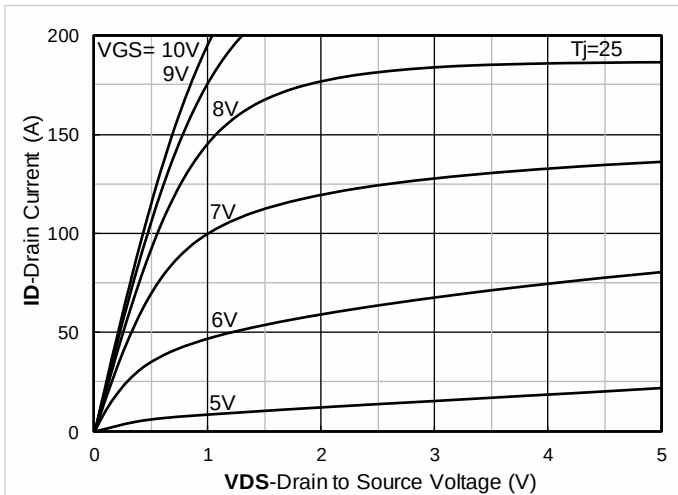


Figure 1. Output Characteristics

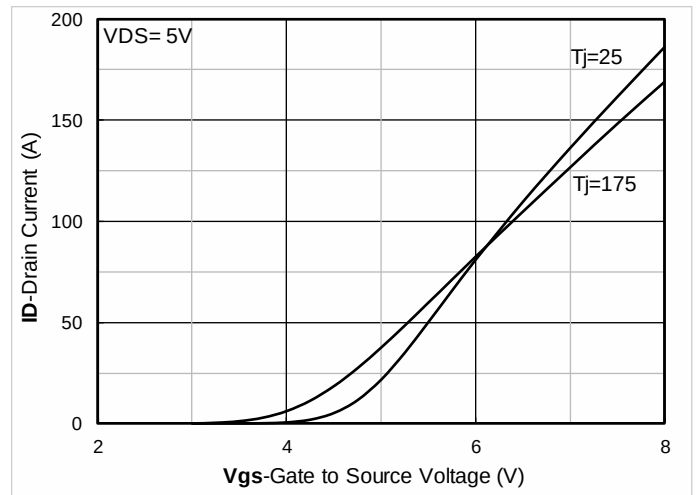


Figure 2. Transfer Characteristics

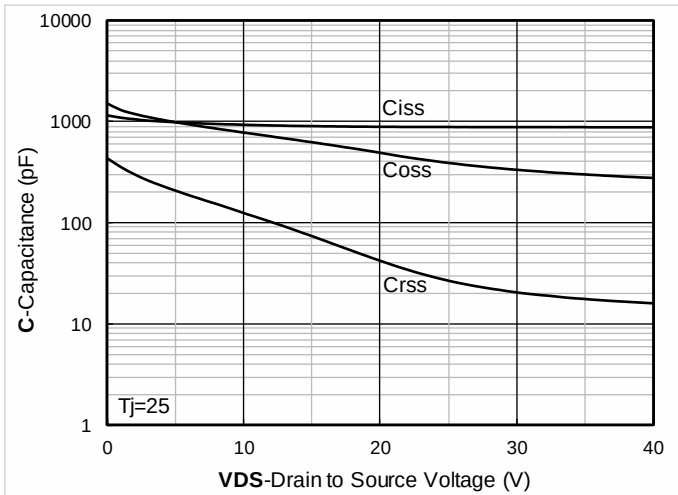


Figure 3. Capacitance Characteristics

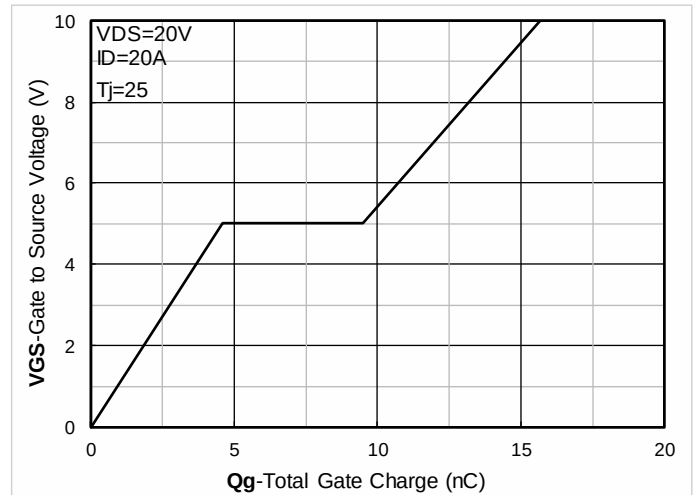


Figure 4. Gate Charge

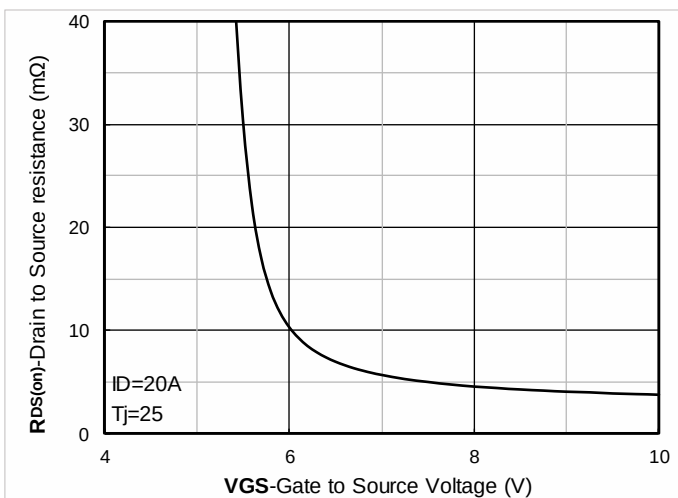


Figure 5. On-Resistance vs Gate to Source Voltage

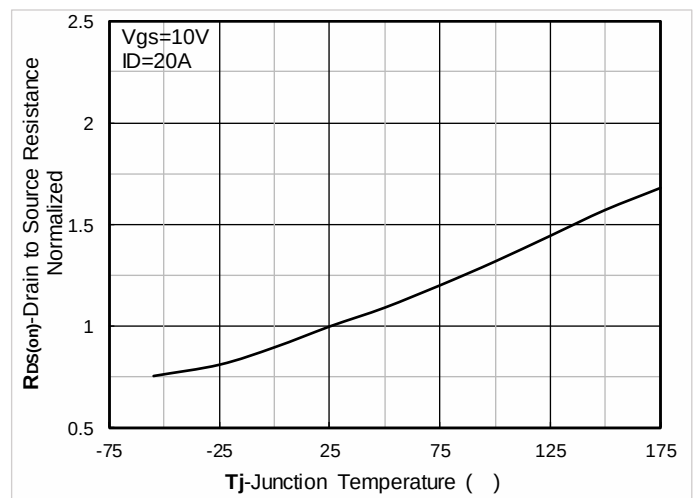


Figure 6. Normalized On-Resistance



# YJQ4D8G04HQ

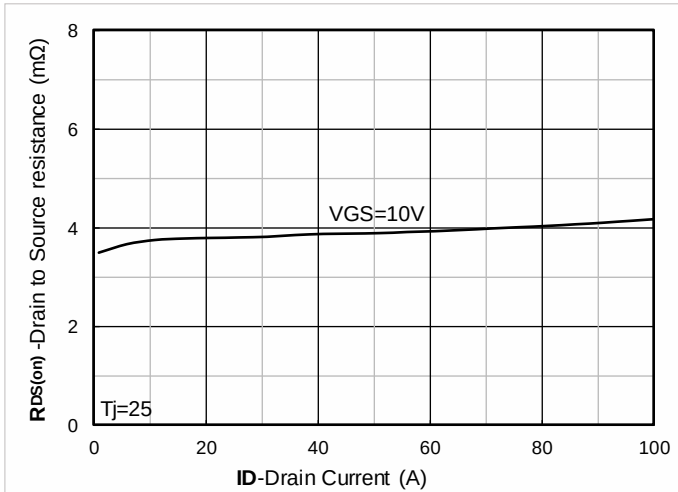


Figure 7.  $R_{DS(on)}$  VS Drain Current

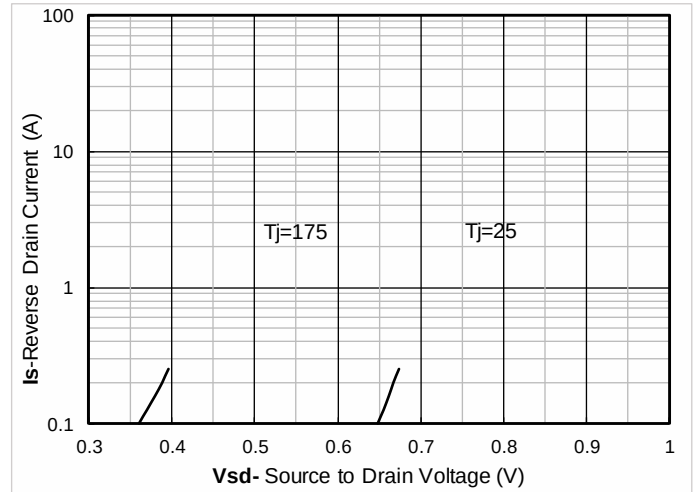


Figure 8. Forward characteristics of reverse diode

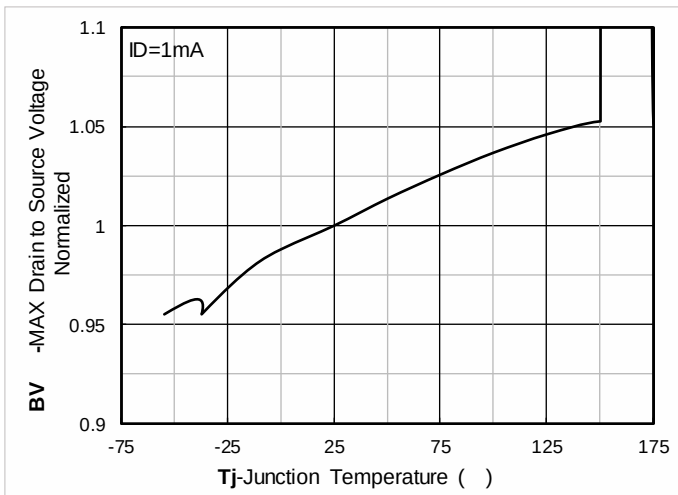


Figure 9. Normalized breakdown voltage

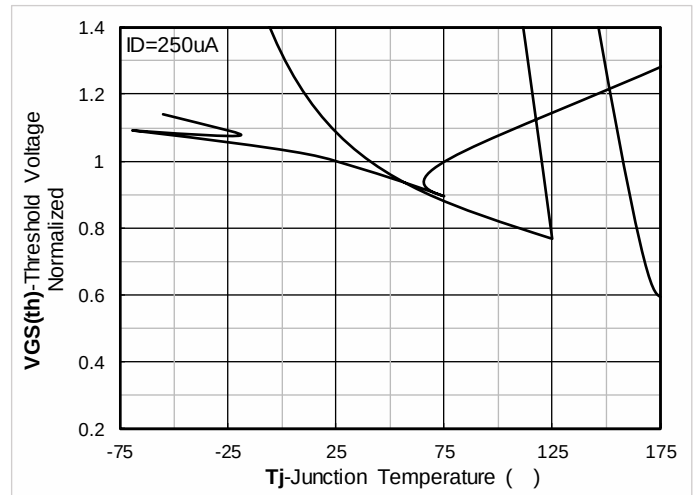


Figure 10. Normalized Threshold voltage

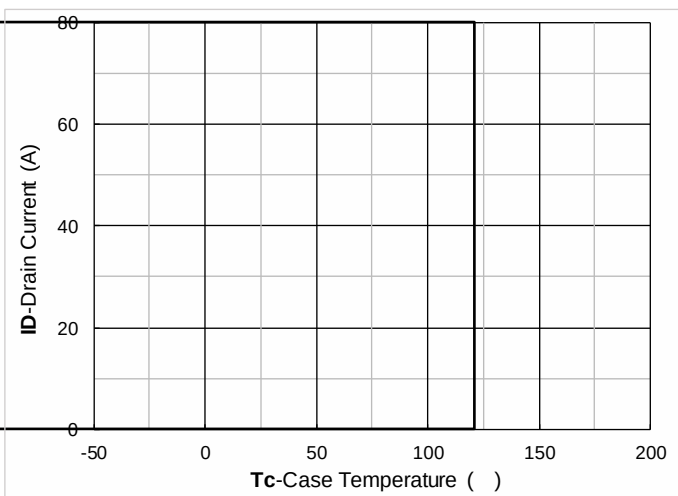


Figure 11. Current dissipation

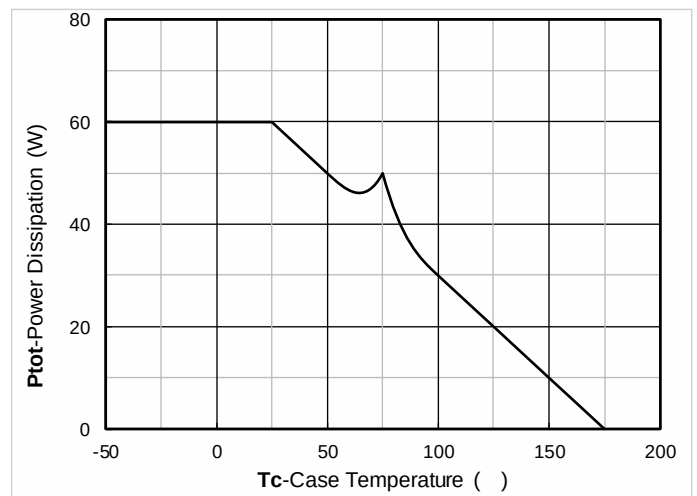


Figure 12. Power dissipation

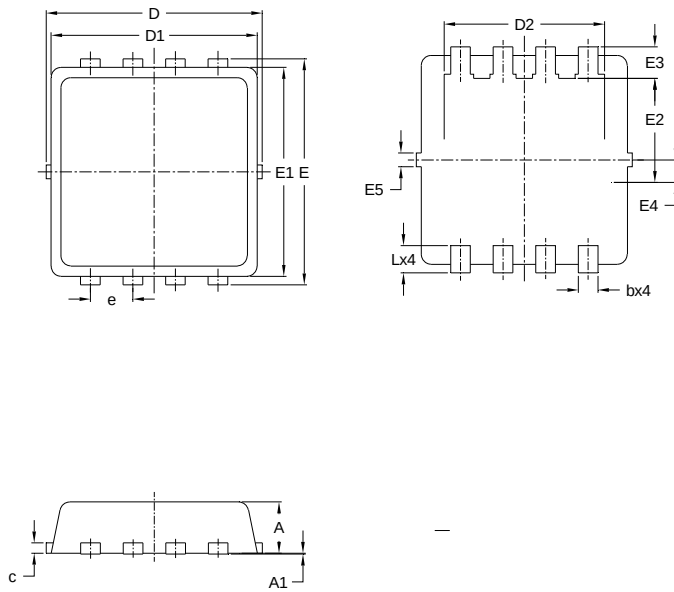






## YJQ4D8G04HQ

### ■ PDFN3333-8L-B-0.75MM Package information



| SYMBOL | DIMENSIONS |       |            |       |
|--------|------------|-------|------------|-------|
|        | INCHES     |       | Millimeter |       |
|        | MIN.       | MAX.  | MIN.       | MAX.  |
| A      | 0.028      | 0.033 | 0.700      | 0.850 |
| A1     | 0.000      | 0.002 | 0.000      | 0.050 |
| b      | 0.008      | 0.016 | 0.200      | 0.400 |
| c      | 0.004      | 0.010 | 0.100      | 0.250 |
| D      | 0.124      | 0.136 | 3.150      | 3.450 |
| D1     | 0.118      | 0.130 | 3.000      | 3.300 |
| D2     | 0.089      | 0.104 | 2.250      | 2.650 |
| E      | 0.124      | 0.136 | 3.150      | 3.450 |
| E1     | 0.114      | 0.126 | 2.900      | 3.200 |
| E2     | 0.052      | 0.068 | 1.320      | 1.720 |
| E3     | 0.011      | 0.026 | 0.280      | 0.650 |
| E4     | 0.013 REF  |       | 0.330 REF  |       |
| E5     | 0.008 REF  |       | 0.200 REF  |       |
| e      | 0.026 BSC  |       | 0.650 BSC  |       |
| L      | 0.012      | 0.020 | 0.300      | 0.500 |

#### NOTE:

- 1.PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
- 2.TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
- 3.THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

UNIT mm

$$< - 4 \quad ' \quad * \quad + 4$$

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<DQJJKRX <DQJMLH (OHFWURQL