

این دیتاشیت توسط توکل الکترونیک تهیه و ارائه شده است.

جهت مشاهده قیمت، موجودی و ثبت سفارش این قطعه به وبسایت توکل الکترونیک مراجعه فرمایید.



مشاهده قیمت و خرید

برای خرید و مشاهده سایر محصولات کلیک کنید



Ordering number : EN5424A

N-Channel Silicon MOSFET

2SK2347

SANYO

High-Voltage, High-Speed  
Switching Applications

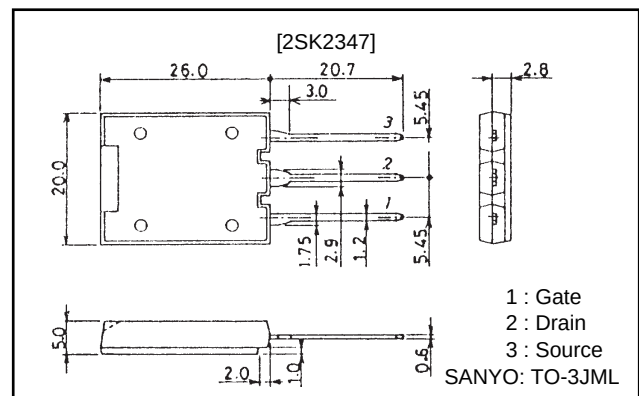
### Features

- Low ON resistance, ultrahigh-speed switching.
- High reliability (Adoption of HVP process).

### Package Dimensions

unit: mm

2131-TO-3JML



### Specifications

Absolute Maximum Ratings at Ta=25°C

| Parameter                   | Symbol    | Conditions                                | Ratings     | Unit       |
|-----------------------------|-----------|-------------------------------------------|-------------|------------|
| Drain-to-Source Voltage     | $V_{DS}$  |                                           | 1000        | V          |
| Gate-to-Source Voltage      | $V_{GS}$  |                                           | $\pm 30$    | V          |
| Drain Current (DC)          | $I_D$     |                                           | 20          | A          |
| Drain Current (pulse)       | $I_{DP}$  | $PW \leq 10\mu s$ , duty cycle $\leq 1\%$ | 40          | A          |
| Allowable Power Dissipation | $P_D$     |                                           | 4.6         | W          |
|                             |           | $T_c = 25^\circ C$                        | 160         | W          |
| Channel Temperature         | $T_{ch}$  |                                           | 150         | $^\circ C$ |
| Storage temperature         | $T_{stg}$ |                                           | -55 to +150 | $^\circ C$ |

### Electrical Characteristics at Ta=25°C

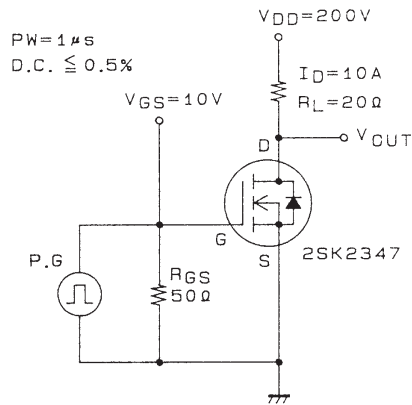
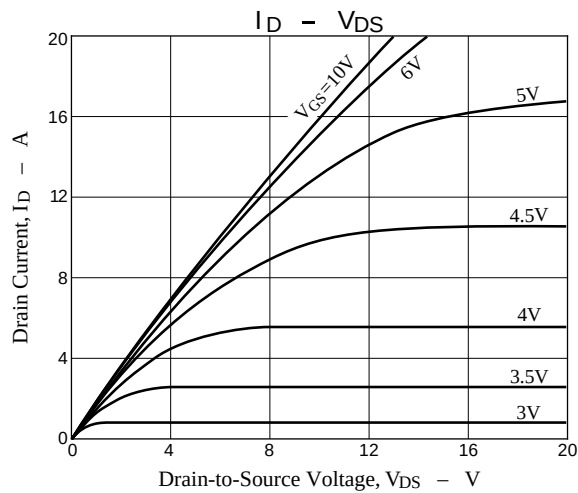
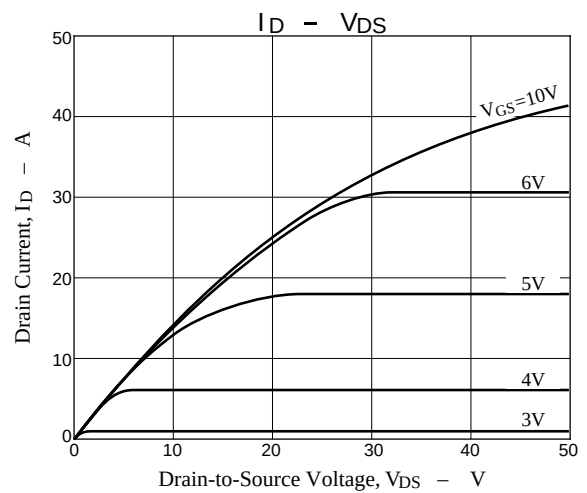
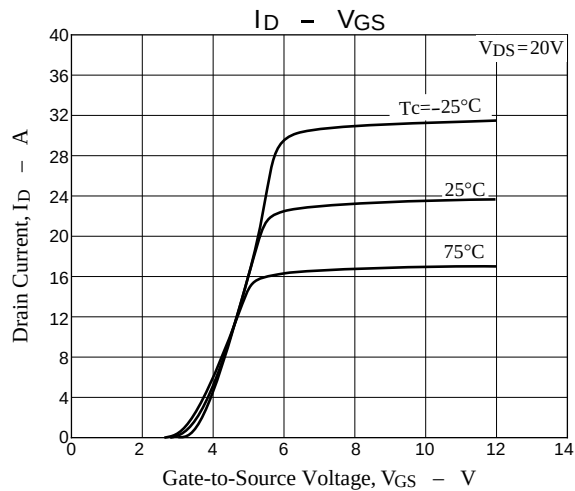
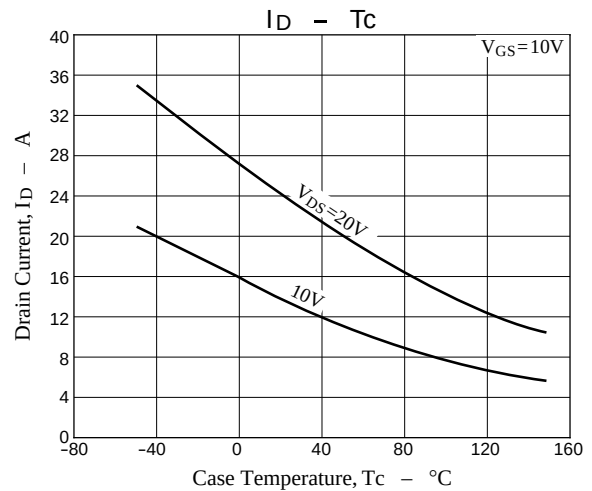
| Parameter                                  | Symbol        | Conditions                        | Ratings |      |           | Unit     |
|--------------------------------------------|---------------|-----------------------------------|---------|------|-----------|----------|
|                                            |               |                                   | min     | typ  | max       |          |
| D-S Breakdown Voltage                      | $V_{(BR)DSS}$ | $I_D = 1mA$ , $V_{GS} = 0$        | 1000    |      |           | V        |
| Zero-Gate Voltage Drain Current            | $I_{DSS}$     | $V_{DS} = 1000V$ , $V_{GS} = 0$   |         |      | 1.0       | mA       |
| Gate-to Source Leak Current                | $I_{GSS}$     | $V_{GS} = \pm 30V$ , $V_{DS} = 0$ |         |      | $\pm 100$ | nA       |
| Cutoff Voltage                             | $V_{GS(off)}$ | $V_{DS} = 10V$ , $I_D = 1mA$      | 1.5     |      | 3.5       | V        |
| Forward Transfer Admittance                | $ y_{fs} $    | $V_{DS} = 20V$ , $I_D = 10A$      | 5.0     | 10   |           | S        |
| Static Drain-to-Source ON-State Resistance | $R_{DS(on)}$  | $I_D = 10A$ , $V_{GS} = 10V$      |         | 0.6  | 0.8       | $\Omega$ |
| Input Capacitance                          | $C_{iss}$     | $V_{DS} = 20V$ , $f = 1MHz$       |         | 3300 |           | pF       |
| Output Capacitance                         | $C_{oss}$     | $V_{DS} = 20V$ , $f = 1MHz$       |         | 750  |           | pF       |
| Reverse Transfer Capacitance               | $C_{rss}$     | $V_{DS} = 20V$ , $f = 1MHz$       |         | 500  |           | pF       |

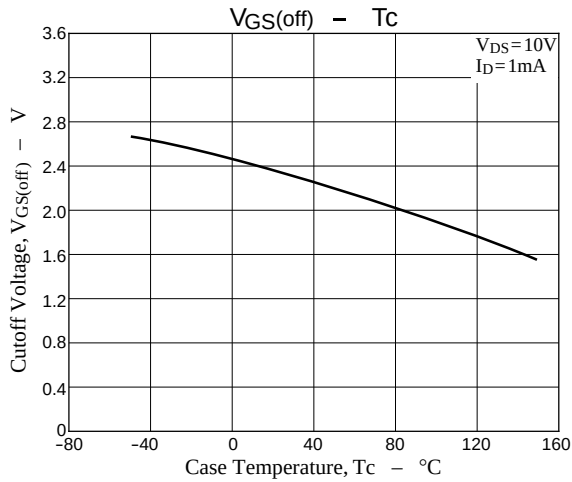
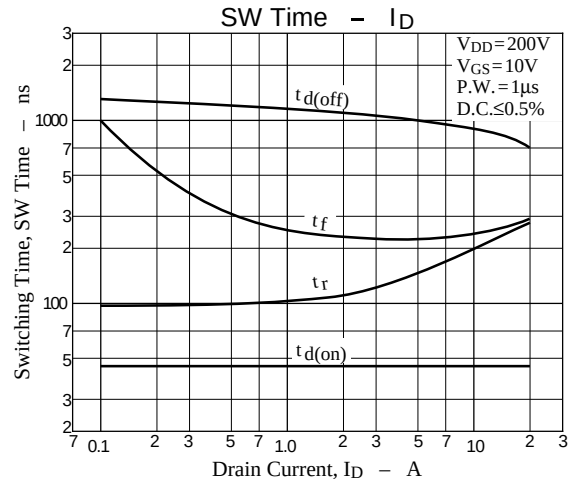
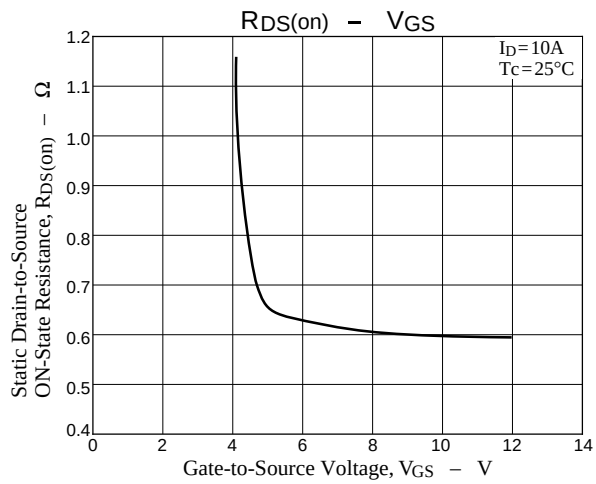
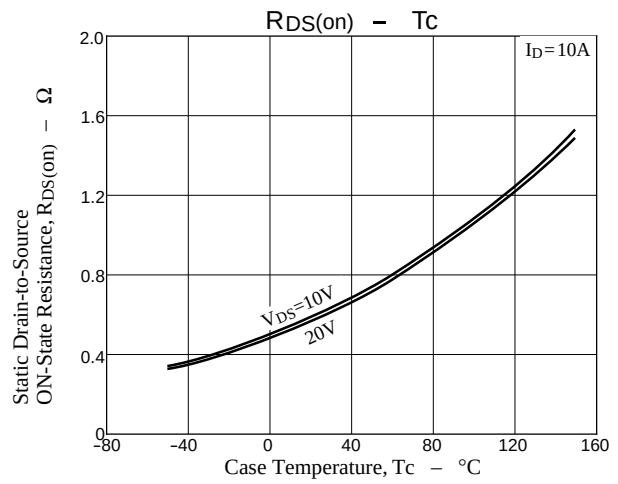
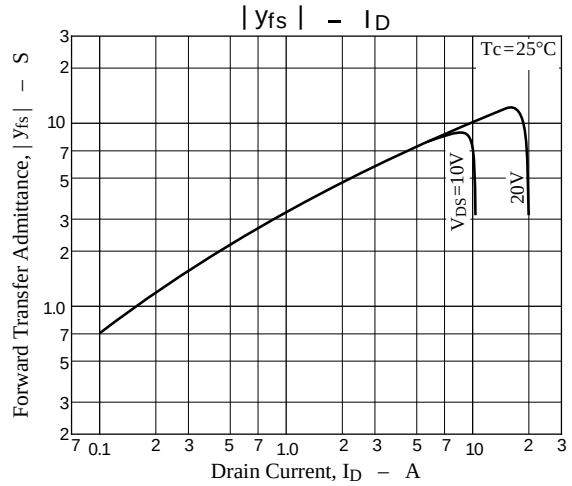
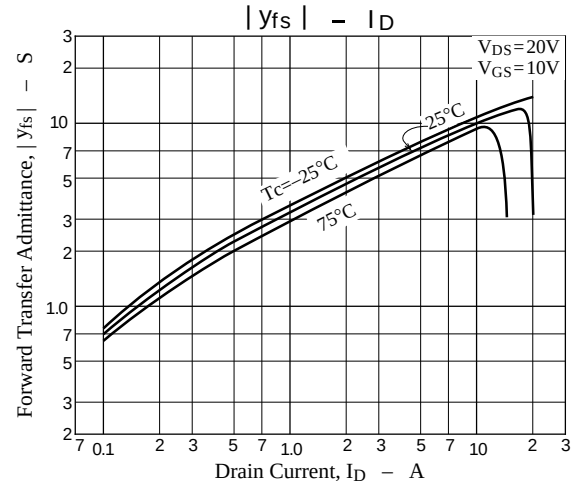
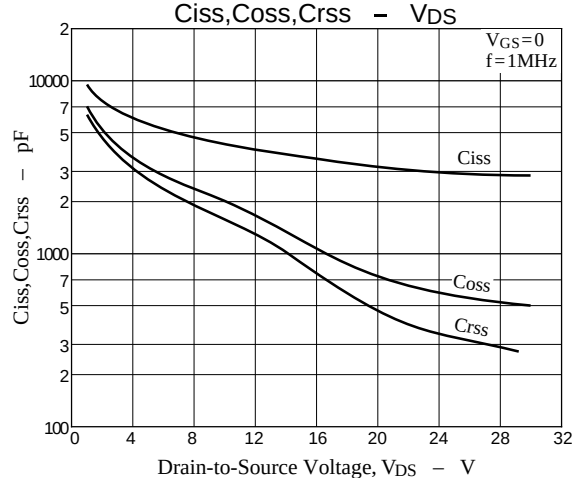
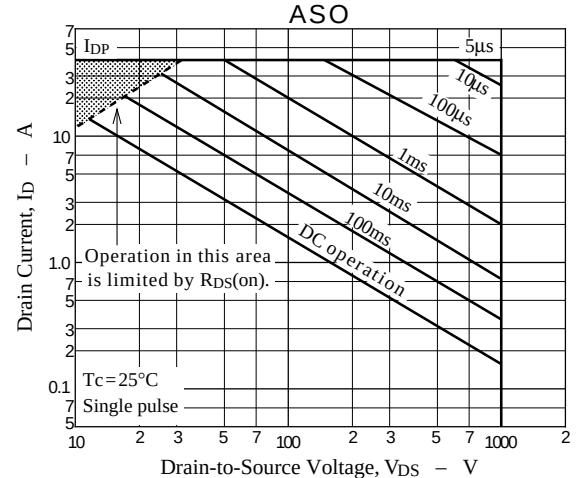
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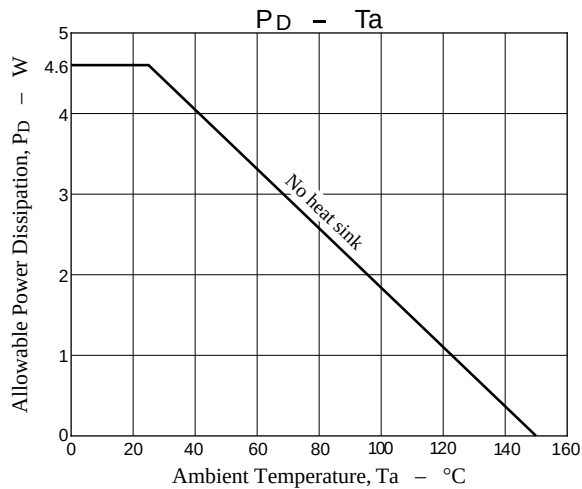
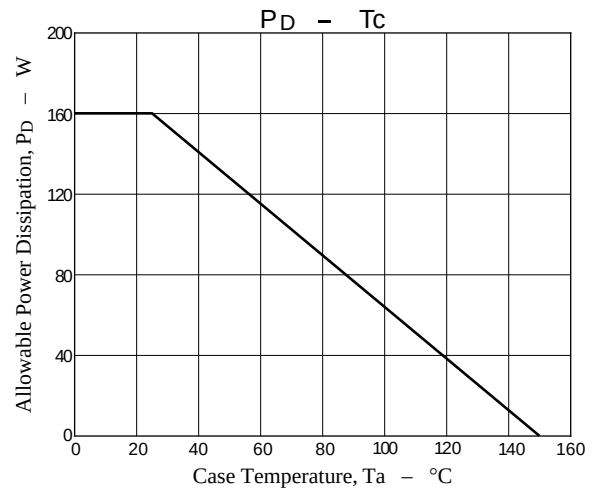
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| Parameter             | Symbol       | Conditions                                               | Ratings |     |     | Unit    |
|-----------------------|--------------|----------------------------------------------------------|---------|-----|-----|---------|
|                       |              |                                                          | min     | typ | max |         |
| Turn-ON Delay Time    | $t_{d(on)}$  | $I_D=10A, V_{GS}=10V,$<br>$V_{DD}=200V, R_{GS}=50\Omega$ |         | 45  |     | ns      |
| Rise Time             | $t_r$        |                                                          |         | 200 |     | ns      |
| Turn-OFF Delay Time   | $t_{d(off)}$ |                                                          |         | 900 |     | ns      |
| Fall Time             | $t_f$        |                                                          |         | 250 |     | ns      |
| Diode Forward Voltage | $V_{SD}$     | $I_S=20A, V_{GS}=0$                                      |         |     | 1.5 | V       |
| Reverse Recovery Time | $t_{rr}$     | $I_S=20A, di/dt=100A/\mu s$                              |         | 0.5 | 1.0 | $\mu s$ |

## Switching Time Test Circuit







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