

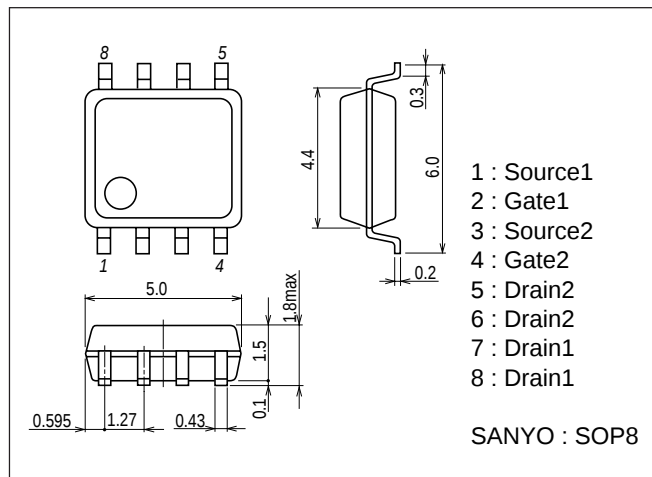
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| Parameter                                  | Symbol        | Conditions                          | Ratings |       |          | Unit      |
|--------------------------------------------|---------------|-------------------------------------|---------|-------|----------|-----------|
|                                            |               |                                     | min     | typ   | max      |           |
| Input Capacitance                          | Ciss          | $V_{DS}=10V, f=1MHz$                |         | 850   |          | pF        |
| Output Capacitance                         | Coss          | $V_{DS}=10V, f=1MHz$                |         | 170   |          | pF        |
| Reverse Transfer Capacitance               | Crss          | $V_{DS}=10V, f=1MHz$                |         | 125   |          | pF        |
| Turn-ON Delay Time                         | $t_d(on)$     | See specified Test Circuit.         |         | 12.5  |          | ns        |
| Rise Time                                  | $t_r$         | See specified Test Circuit.         |         | 108   |          | ns        |
| Turn-OFF Delay Time                        | $t_d(off)$    | See specified Test Circuit.         |         | 77    |          | ns        |
| Fall Time                                  | $t_f$         | See specified Test Circuit.         |         | 61    |          | ns        |
| Total Gate Charge                          | Qg            | $V_{DS}=10V, V_{GS}=10V, I_D=6A$    |         | 16    |          | nC        |
| Gate-to-Source Charge                      | Qgs           | $V_{DS}=10V, V_{GS}=10V, I_D=6A$    |         | 3.4   |          | nC        |
| Gate-to-Drain "Miller" Charge              | Qgd           | $V_{DS}=10V, V_{GS}=10V, I_D=6A$    |         | 2.4   |          | nC        |
| Diode Forward Voltage                      | $V_{SD}$      | $I_S=6A, V_{GS}=0$                  |         | 0.84  | 1.2      | V         |
| [P-channel]                                |               |                                     |         |       |          |           |
| Drain-to-Source Breakdown Voltage          | $V_{(BR)DSS}$ | $I_D=-1mA, V_{GS}=0$                | -30     |       |          | V         |
| Zero-Gate Voltage Drain Current            | $I_{DSS}$     | $V_{DS}=-30V, V_{GS}=0$             |         |       | -1       | $\mu A$   |
| Gate-to-Source Leakage Current             | $I_{GSS}$     | $V_{GS}=\pm 16V, V_{DS}=0$          |         |       | $\pm 10$ | $\mu A$   |
| Cutoff Voltage                             | $V_{GS(off)}$ | $V_{DS}=-10V, I_D=-1mA$             | -1.2    |       | -2.6     | V         |
| Forward Transfer Admittance                | $ y_{fs} $    | $V_{DS}=-10V, I_D=-5A$              | 4.5     | 7.5   |          | S         |
| Static Drain-to-Source On-State Resistance | $R_{DS(on)1}$ | $I_D=-5A, V_{GS}=-10V$              |         | 41    | 53       | $m\Omega$ |
|                                            | $R_{DS(on)2}$ | $I_D=-3A, V_{GS}=-4.5V$             |         | 62    | 87       | $m\Omega$ |
|                                            | $R_{DS(on)3}$ | $I_D=-3A, V_{GS}=-4V$               |         | 70    | 98       | $m\Omega$ |
| Input Capacitance                          | Ciss          | $V_{DS}=-10V, f=1MHz$               |         | 1000  |          | pF        |
| Output Capacitance                         | Coss          | $V_{DS}=-10V, f=1MHz$               |         | 195   |          | pF        |
| Reverse Transfer Capacitance               | Crss          | $V_{DS}=-10V, f=1MHz$               |         | 150   |          | pF        |
| Turn-ON Delay Time                         | $t_d(on)$     | See specified Test Circuit.         |         | 13    |          | ns        |
| Rise Time                                  | $t_r$         | See specified Test Circuit.         |         | 82    |          | ns        |
| Turn-OFF Delay Time                        | $t_d(off)$    | See specified Test Circuit.         |         | 87    |          | ns        |
| Fall Time                                  | $t_f$         | See specified Test Circuit.         |         | 55    |          | ns        |
| Total Gate Charge                          | Qg            | $V_{DS}=-10V, V_{GS}=-10V, I_D=-5A$ |         | 16.5  |          | nC        |
| Gate-to-Source Charge                      | Qgs           | $V_{DS}=-10V, V_{GS}=-10V, I_D=-5A$ |         | 2.5   |          | nC        |
| Gate-to-Drain "Miller" Charge              | Qgd           | $V_{DS}=-10V, V_{GS}=-10V, I_D=-5A$ |         | 2.5   |          | nC        |
| Diode Forward Voltage                      | $V_{SD}$      | $I_S=-5A, V_{GS}=0$                 |         | -0.85 | -1.5     | V         |

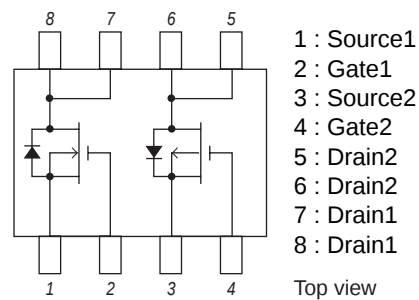
## Package Dimensions

unit : mm

2129

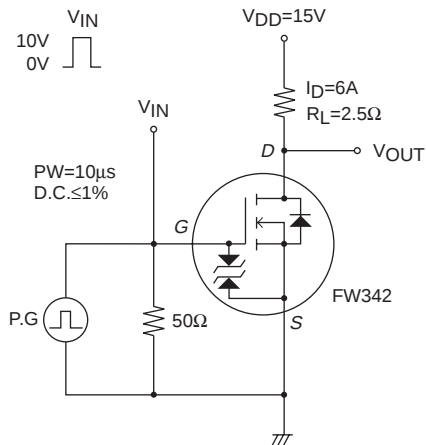


## Electrical Connection

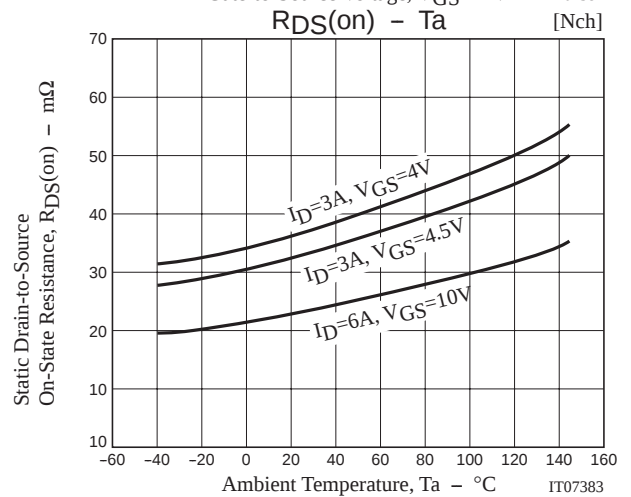
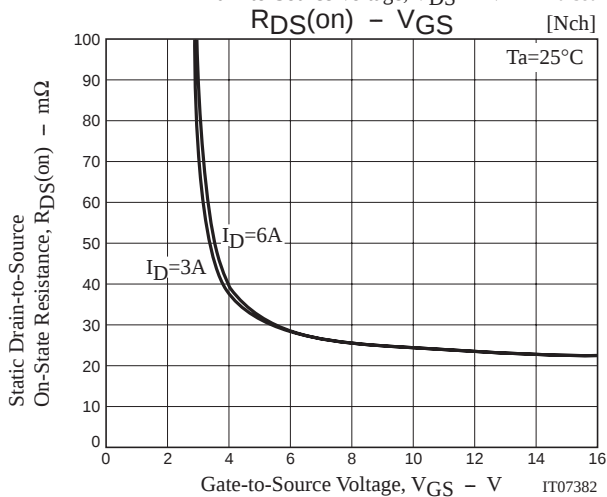
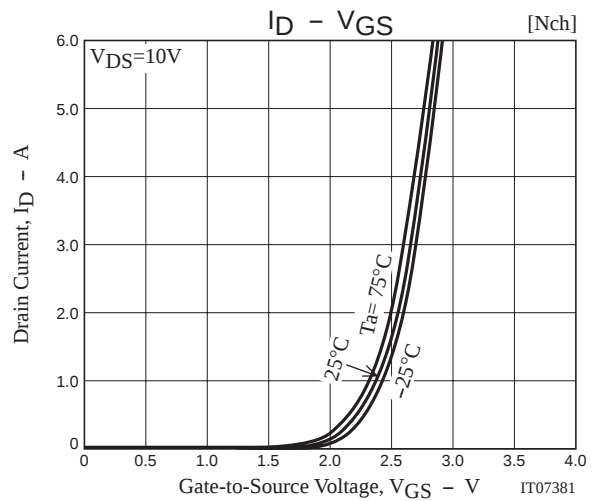
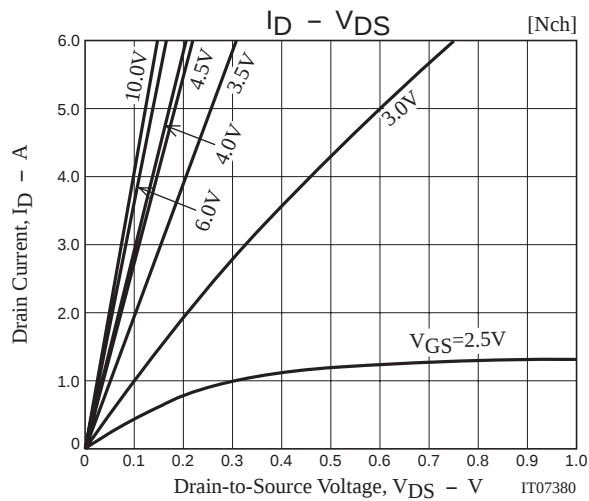
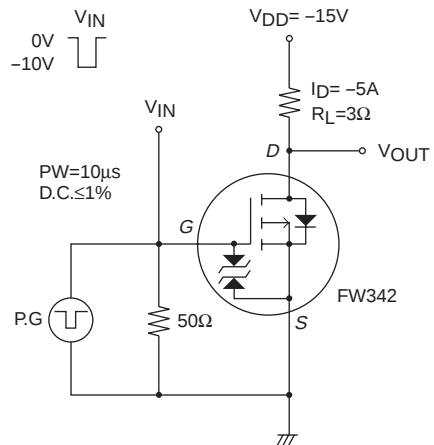


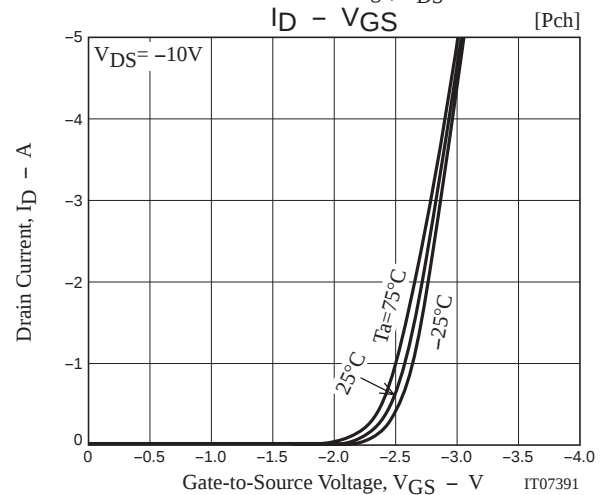
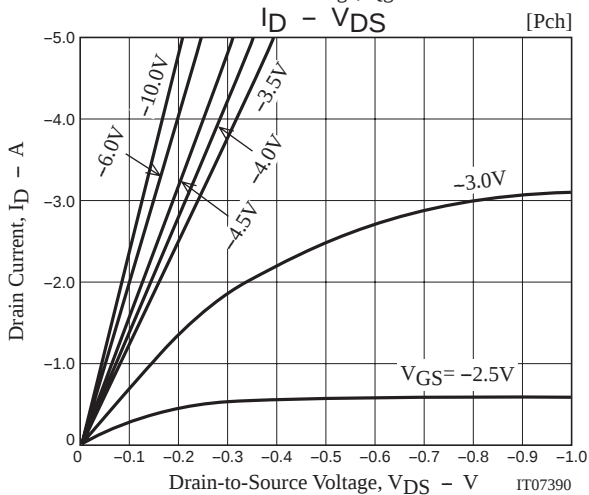
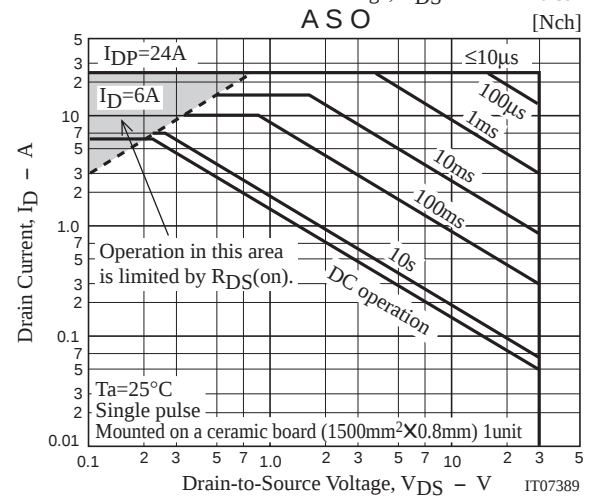
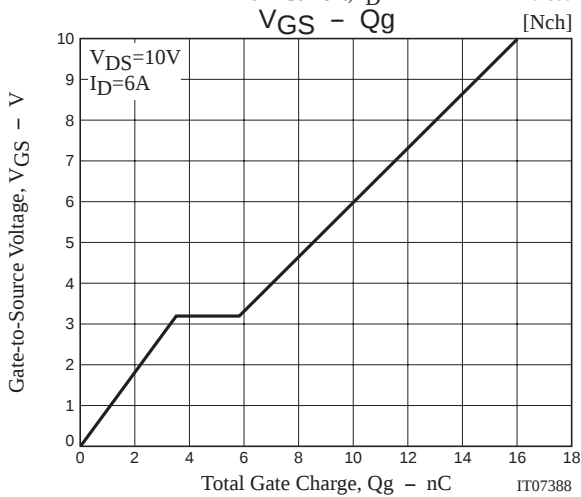
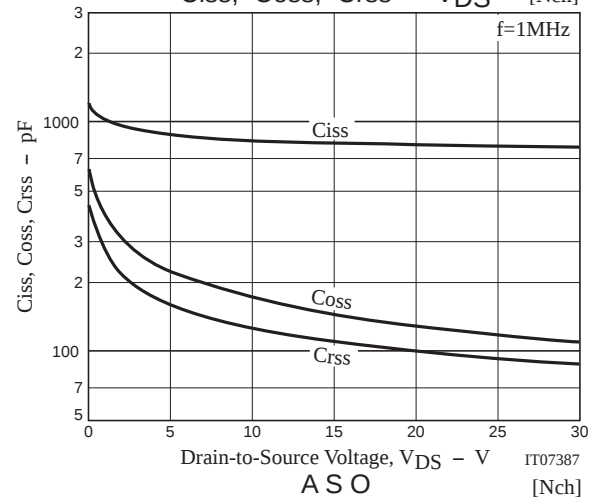
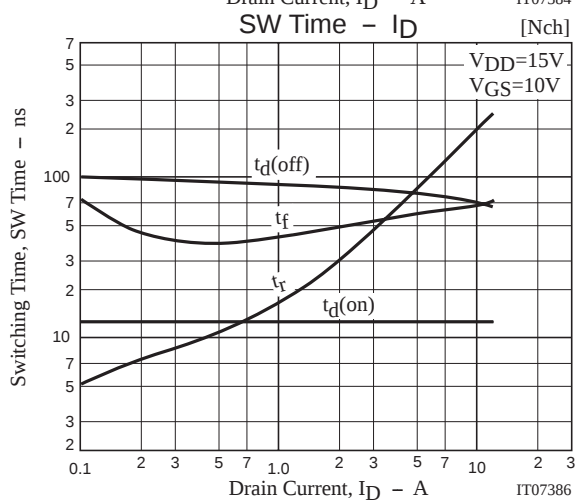
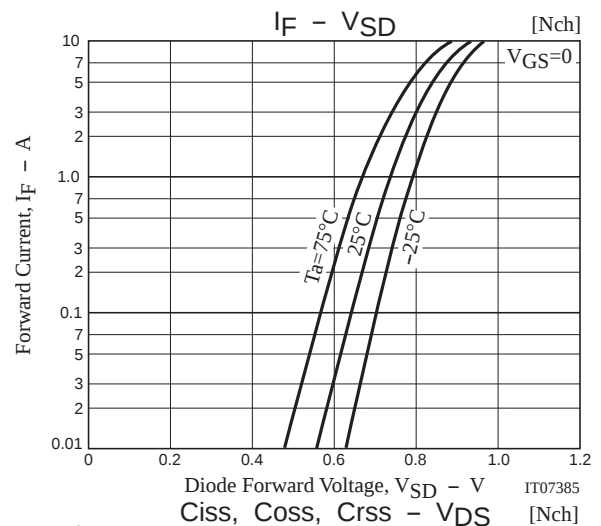
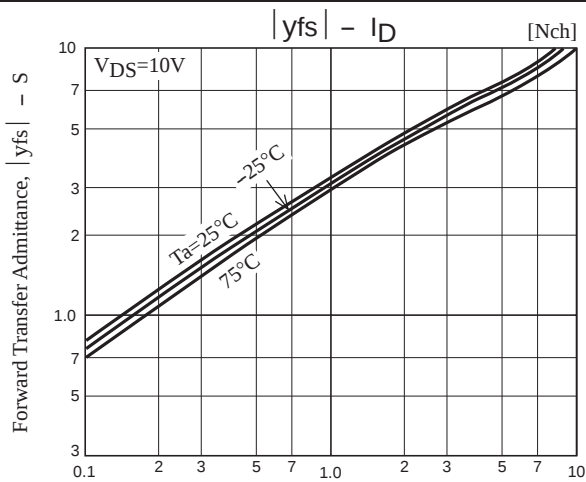
## Switching Time Test Circuit

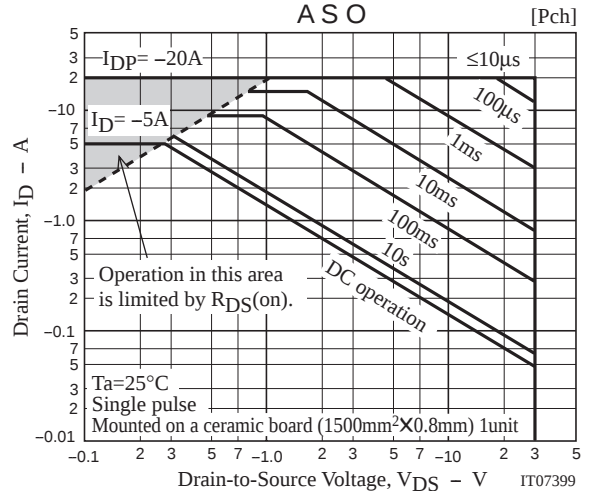
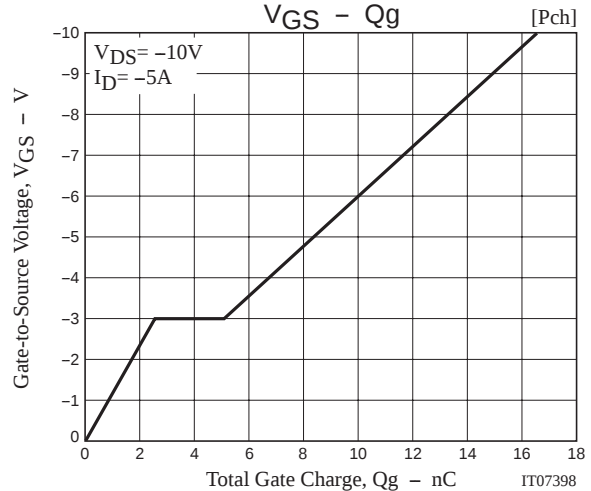
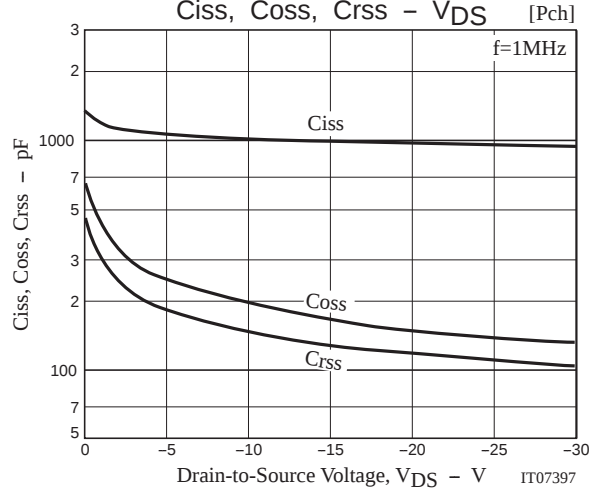
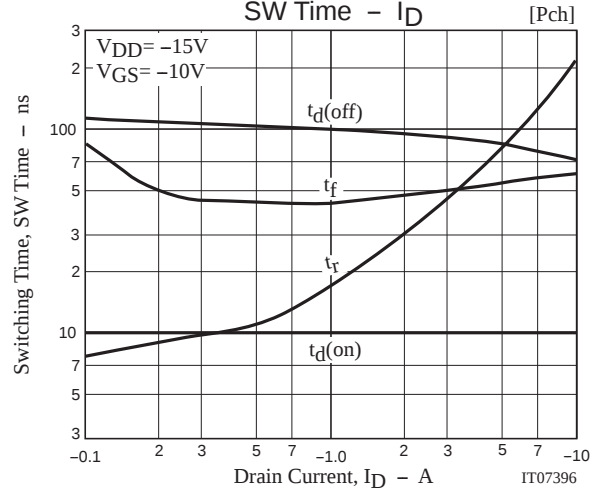
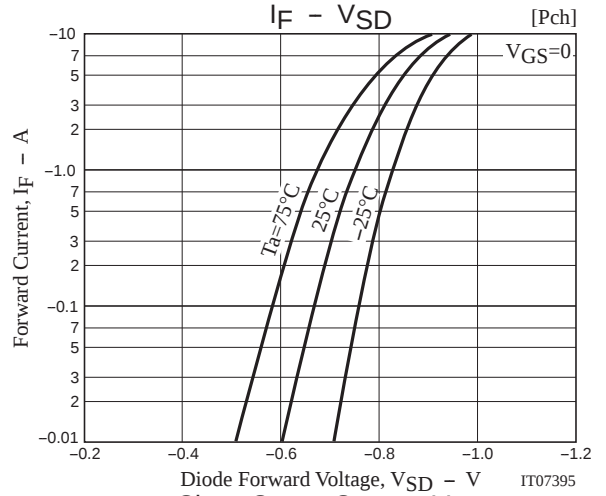
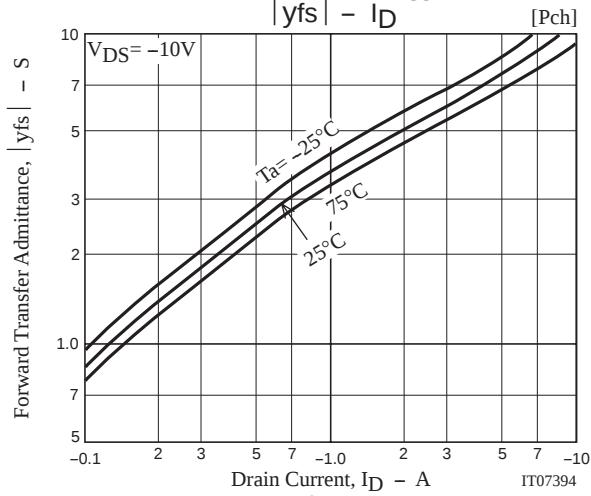
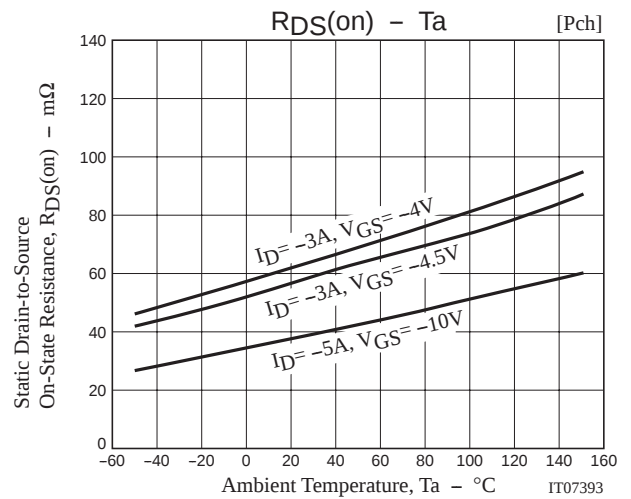
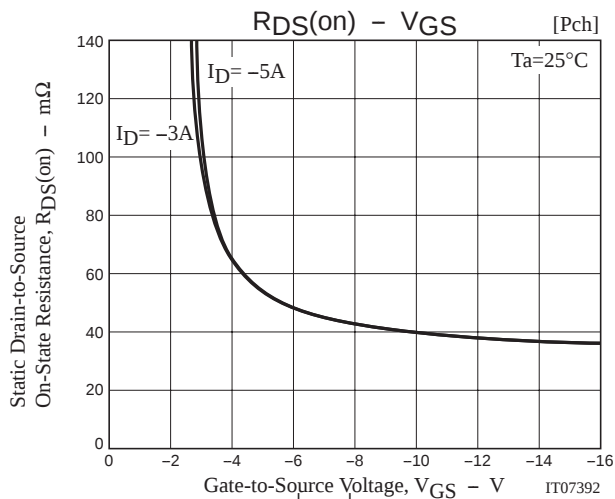
[N-channel]

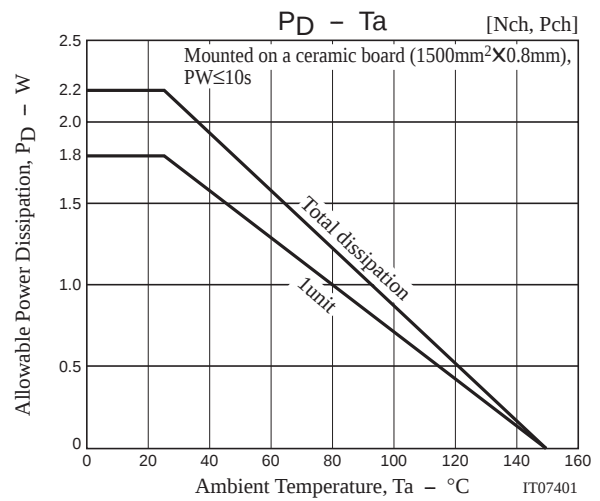
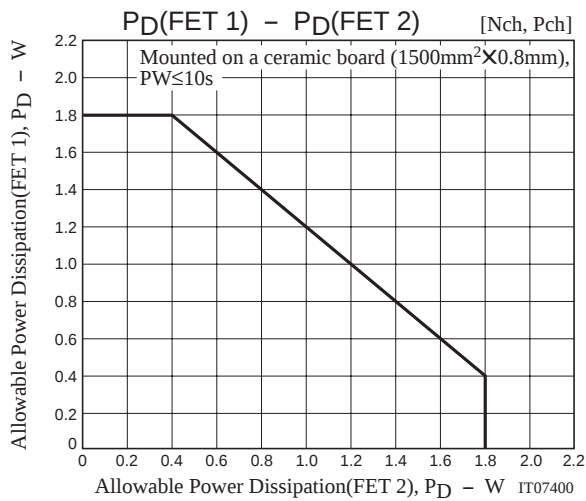


[P-channel]









Note on usage : Since the FW342 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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