

## MOSFET Modules



### Features

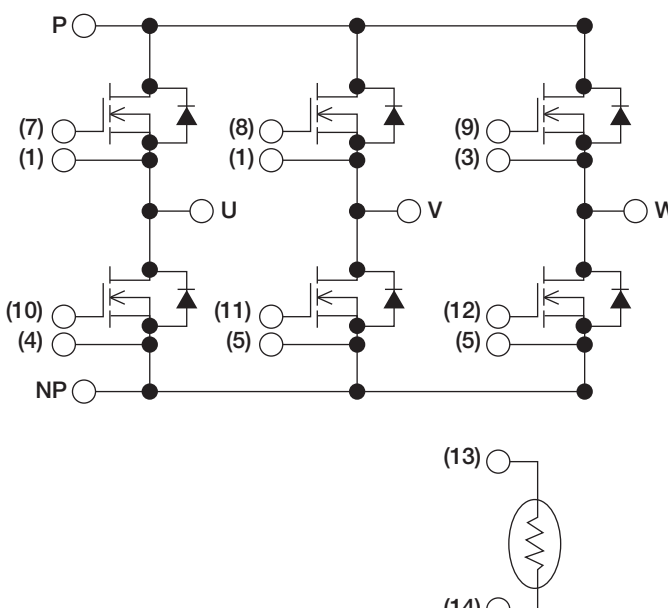
- Low  $V_{DS(ON)}$  and Low  $V_{SD}$
- Advanced 0.35 $\mu$ m trench gate MOSFET chip technology
- $R_{DS(ON)} = 0.8m\Omega$  (FM400TU-07A @ 25°C)
- Operation without snubber circuit possible
- Avalanche capability is guaranteed at turn-off & recovery
- Control terminals for standard connector
- Inbuilt Thermal sensor (NTC)
- High reliability
- 100A<sub>(rms)</sub>, 200A<sub>(rms)</sub>, 300A<sub>(rms)</sub> available in 75V, 100V and 150V in a 6 in 1 compact package



Ihr Vertriebspartner:  
**HY-LINE**<sup>®</sup>  
 POWER COMPONENTS

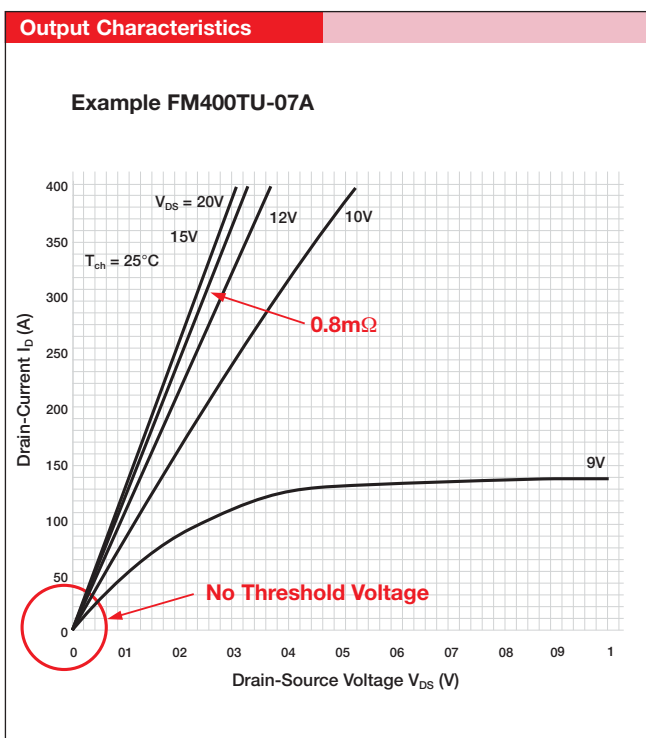
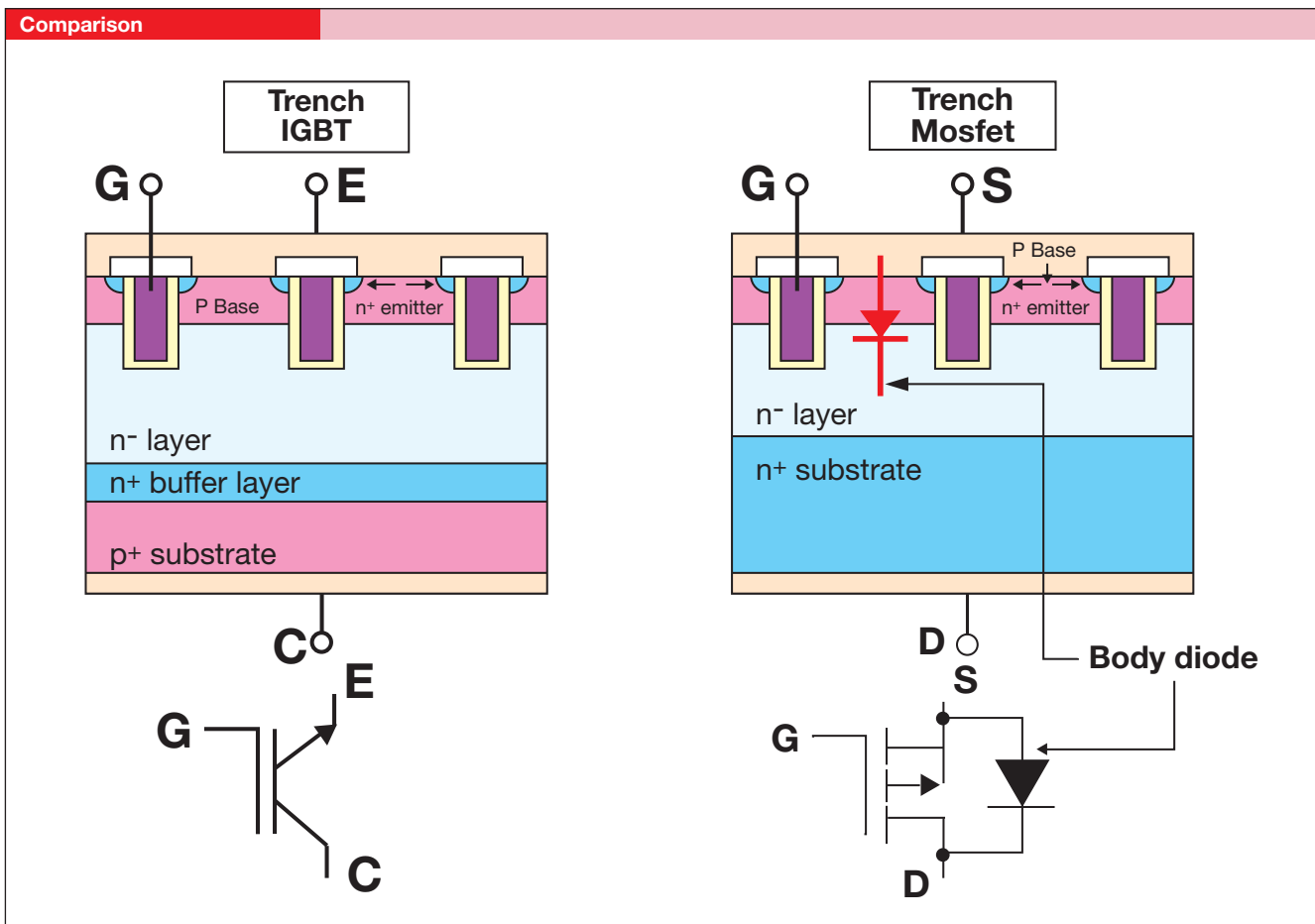
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### 3. MOSFET Modules

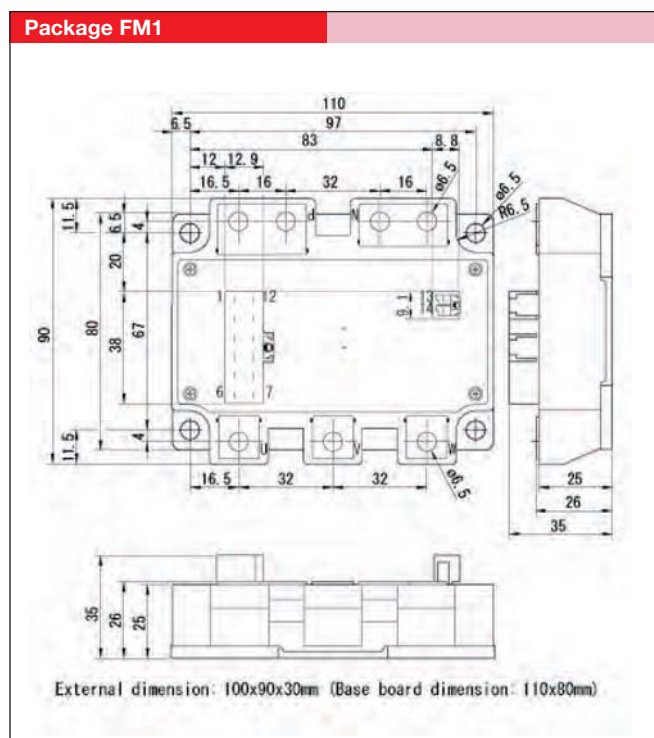
| Circuit Diagram   | Rated Current (A) | Voltage (V) | Type Number |
|---|-------------------|-------------|-------------|
|  <p>(1) <math>S_{UP}</math>    (5) <math>S_{VN}</math>    (9) <math>G_{AP}</math><br/> (2) <math>S_{VP}</math>    (6) <math>S_{UN}</math>    (10) <math>G_{UN}</math><br/> (3) <math>S_{VP}</math>    (7) <math>G_{UP}</math>    (11) <math>G_{VN}</math>    (13) TH1<br/> (3) <math>S_{UN}</math>    (8) <math>G_{VP}</math>    (12) <math>G_{VN}</math>    (14) TH2</p> | 100               | 75          | FM200TU-07A |
|   |                   | 100         | FM200TU-2A  |
|   |                   | 150         | FM200TU-3A  |
|   | 200               | 75          | FM400TU-07A |
|   |                   | 100         | FM400TU-2A  |
|   |                   | 150         | FM400TU-3A  |
|   | 300               | 75          | FM600TU-07A |
|   |                   | 100         | FM600TU-2A  |
|   |                   | 150         | FM600TU-3A  |

| Type Number | Maximum Ratings |                                       | Electrical Characteristics                                  |      |                   |                   |                   |                         |               |                      |               |                  | Thermal & Mechanical Characteristics |                 |  |  | Package-No. |
|-------------|-----------------|---------------------------------------|---|------|-------------------|-------------------|-------------------|-------------------------|---------------|----------------------|---------------|------------------|--------------------------------------|-----------------|--|--|-------------|
|             | $V_{DS}$<br>(V) | $I_{D(rms)}$<br>(A <sub>(rms)</sub> ) | $r_{DS(ON)}$<br>@ $T_j = 25^\circ\text{C}$<br>(m $\Omega$ ) |      | $C_{iss}$<br>(nF) | $C_{oss}$<br>(nF) | $C_{rSS}$<br>(nF) | Maximum Switching Times |               |                      |               |                  | $Q_{rr}$<br>( $\mu\text{C}$ )        | $V_{SD}$<br>(V) | MOSFET<br>$R_{th(j-c)}$<br>( $^\circ\text{C}/\text{W}$ ) | $R_{th(j-c)}$<br>( $^\circ\text{C}/\text{W}$ ) |             |
|             |                 |                                       | Typ.  | Max. |                   |                   |                   | $t_{d(on)}$<br>(ns)     | $t_r$<br>(ns) | $t_{d(off)}$<br>(ns) | $t_f$<br>(ns) | $t_{rr}$<br>(ns) |                                      |                 |  |  |             |
| FM200TU-07A | 75              | 100                                   | 1.20  | 1.65 | 50                | 7                 | 4                 | 450                     | 400           | 600                  | 400           | 200              | 2.0                                  | 1.3             | 0.220  | 0.1  | FM1         |
| FM400TU-07A | 75              | 200                                   | 0.80  | 1.10 | 75                | 10                | 6                 | 450                     | 500           | 450                  | 400           | 200              | 4.5                                  | 1.3             | 0.142  | 0.1  | FM1         |
| FM600TU-07A | 75              | 300                                   | 0.53  | 0.73 | 110               | 15                | 10                | 450                     | 600           | 600                  | 400           | 200              | 4.8                                  | 1.3             | 0.096  | 0.1  | FM1         |
| FM200TU-2A  | 100             | 100                                   | 2.40  | 3.30 | 50                | 7                 | 4                 | 400                     | 300           | 450                  | 300           | 250              | 3.6                                  | 1.3             | 0.220  | 0.1  | FM1         |
| FM400TU-2A  | 100             | 200                                   | 1.45  | 2.00 | 75                | 10                | 6                 | 400                     | 400           | 450                  | 300           | 250              | 6.0                                  | 1.3             | 0.142  | 0.1  | FM1         |
| FM600TU-2A  | 100             | 300                                   | 0.80  | 1.10 | 110               | 15                | 10                | 400                     | 600           | 600                  | 300           | 250              | 6.2                                  | 1.3             | 0.096  | 0.1  | FM1         |
| FM200TU-3A  | 150             | 100                                   | 4.80  | 6.60 | 50                | 7                 | 4                 | 400                     | 250           | 450                  | 200           | 200              | 6.5                                  | 1.3             | 0.220  | 0.1  | FM1         |
| FM400TU-3A  | 150             | 200                                   | 2.60  | 3.55 | 75                | 10                | 6                 | 400                     | 300           | 450                  | 200           | 200              | 7.0                                  | 1.3             | 0.142  | 0.1  | FM1         |
| FM600TU-3A  | 150             | 300                                   | 1.60  | 2.20 | 110               | 15                | 10                | 400                     | 400           | 500                  | 200           | 200              | 8.0                                  | 1.3             | 0.096  | 0.1  | FM1         |

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Dimensions in mm



3