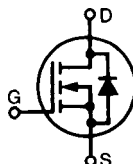


# MegaMOS™ FET

|                              | $V_{DSS}$ | $I_{D25}$ | $R_{DS(on)}$  |
|------------------------------|-----------|-----------|---------------|
| <del>IXTH / IXTM</del> 11N80 | 800 V     | 11 A      | 0.95 $\Omega$ |
| <del>IXTH / IXTM</del> 13N80 | 800 V     | 13 A      | 0.80 $\Omega$ |

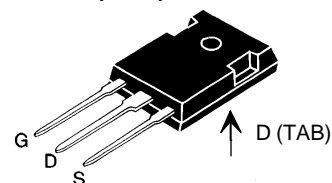
N-Channel Enhancement Mode

Obsolete:  
IXTM11N80  
IXTM13N80



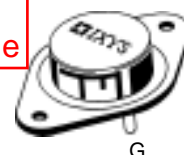
| Symbol  | Test Conditions   | Maximum Ratings             |                  |
|---|---|-----------------------------|------------------|
| $V_{DSS}$   | $T_J = 25^\circ\text{C}$ to $150^\circ\text{C}$                               | 800                         | V                |
| $V_{DGR}$   | $T_J = 25^\circ\text{C}$ to $150^\circ\text{C}$ ; $R_{GS} = 1\text{ M}\Omega$ | 800                         | V                |
| $V_{GS}$  | Continuous  | $\pm 20$                    | V                |
| $V_{GSM}$   | Transient   | $\pm 30$                    | V                |
| $I_{D25}$   | $T_C = 25^\circ\text{C}$  | 11N80                       | 11 A             |
|   |   | 13N80                       | 13 A             |
| $I_{DM}$  | $T_C = 25^\circ\text{C}$ , pulse width limited by $T_{JM}$                    | 11N80                       | 44 A             |
|   |   | 13N80                       | 52 A             |
| $P_D$   | $T_C = 25^\circ\text{C}$  | 300                         | W                |
| $T_J$   |   | -55 ... +150                | $^\circ\text{C}$ |
| $T_{JM}$  |   | 150                         | $^\circ\text{C}$ |
| $T_{stg}$   |   | -55 ... +150                | $^\circ\text{C}$ |
| $M_d$   | Mounting torque   | 1.13/10                     | Nm/lb.in.        |
| <b>Weight</b>   |   | TO-204 = 18 g, TO-247 = 6 g |                  |
| Maximum lead temperature for soldering<br>1.6 mm (0.062 in.) from case for 10 s |   | 300                         | $^\circ\text{C}$ |

TO-247 AD (IXTH)



~~TO-204 AA (IXTM)~~

Package  
unavailable



G = Gate, D = Drain,  
S = Source, TAB = Drain

### Features

- International standard packages
- Low  $R_{DS(on)}$  HDMOS™ process
- Rugged polysilicon gate cell structure
- Low package inductance (< 5 nH)
  - easy to drive and to protect
- Fast switching times

### Applications

- Switch-mode and resonant-mode power supplies
- Motor controls
- Uninterruptible Power Supplies (UPS)
- DC choppers

### Advantages

- Easy to mount with 1 screw (TO-247) (isolated mounting screw hole)
- Space savings
- High power density

| Symbol       | Test Conditions  | Characteristic Values<br>( $T_J = 25^\circ\text{C}$ , unless otherwise specified) |      |                     |
|--------------|--|---|------|---------------------|
|              |  | min.  | typ. | max.                |
| $V_{DSS}$    | $V_{GS} = 0\text{ V}$ , $I_D = 3\text{ mA}$  | 800   |      | V                   |
| $V_{GS(th)}$ | $V_{DS} = V_{GS}$ , $I_D = 250\text{ }\mu\text{A}$   | 2   |      | 4.5 V               |
| $I_{GSS}$    | $V_{GS} = \pm 20\text{ V}_{DC}$ , $V_{DS} = 0$   |   |      | $\pm 100\text{ nA}$ |
| $I_{DSS}$    | $V_{DS} = 0.8 \cdot V_{DSS}$   |   |      | 250 $\mu\text{A}$   |
|              | $V_{GS} = 0\text{ V}$  |   |      | 1 mA                |
| $R_{DS(on)}$ | Pulse test, $t \leq 300\text{ }\mu\text{s}$ ,<br>$V_{GS} = 10\text{ V}$ , $I_D = 0.5\text{ }I_{D25}$ | 11N80   |      | 0.95 $\Omega$       |
|              |  | 13N80   |      | 0.80 $\Omega$       |

| Symbol       | Test Conditions   | Characteristic Values<br>( $T_J = 25^\circ\text{C}$ , unless otherwise specified) |      |        |
|--------------|---|---|------|--------|
|              |   | min.  | typ. | max.   |
| $g_{fs}$     | $V_{DS} = 10\text{ V}; I_D = 0.5 \cdot I_{D25}$ , pulse test  | 8   | 14   | S      |
| $C_{iss}$    | $V_{GS} = 0\text{ V}, V_{DS} = 25\text{ V}, f = 1\text{ MHz}$   |   | 4500 | pF     |
| $C_{oss}$    |   |   | 310  | pF     |
| $C_{rss}$    |   |   | 65   | pF     |
| $t_{d(on)}$  | $V_{GS} = 10\text{ V}, V_{DS} = 0.5 \cdot V_{DSS}, I_D = 0.5 I_{D25}$<br>$R_G = 2\ \Omega$ , (External) |   | 20   | 50 ns  |
| $t_f$        |   |   | 33   | 50 ns  |
| $t_{d(off)}$ |   |   | 63   | 100 ns |
| $t_f$        |   |   | 32   | 50 ns  |
| $Q_{g(on)}$  | $V_{GS} = 10\text{ V}, V_{DS} = 0.5 \cdot V_{DSS}, I_D = 0.5 I_{D25}$                                   |   | 145  | 170 nC |
| $Q_{gs}$     |   |   | 30   | 45 nC  |
| $Q_{gd}$     |   |   | 55   | 80 nC  |
| $R_{thJC}$   |   |   | 0.42 | K/W    |
| $R_{thCK}$   |   |   | 0.25 | K/W    |

**Source-Drain Diode**

| Symbol   | Test Conditions   | Characteristic Values<br>( $T_J = 25^\circ\text{C}$ , unless otherwise specified) |      |              |
|----------|---|---|------|--------------|
|          |   | min.  | typ. | max.         |
| $I_S$    | $V_{GS} = 0\text{ V}$   | 11N80<br>13N80  |      | 11 A<br>13 A |
| $I_{SM}$ | Repetitive;<br>pulse width limited by $T_{JM}$  | 11N80<br>13N80  |      | 44 A<br>52 A |
| $V_{SD}$ | $I_F = I_S, V_{GS} = 0\text{ V}$ ,<br>Pulse test, $t \leq 300\ \mu\text{s}$ , duty cycle $d \leq 2\%$ |   |      | 1.5 V        |
| $t_{rr}$ | $I_F = I_S, -di/dt = 100\text{ A}/\mu\text{s}, V_R = 100\text{ V}$                                    |   | 800  | ns           |

**TO-247 AD (IXTH) Outline**

Terminals: 1 - Gate 2 - Drain  
3 - Source Tab - Drain

| Dim.           | Millimeter |       | Inches |       |
|----------------|------------|-------|--------|-------|
|                | Min.       | Max.  | Min.   | Max.  |
| A              | 4.7        | 5.3   | .185   | .209  |
| A <sub>1</sub> | 2.2        | 2.54  | .087   | .102  |
| A <sub>2</sub> | 2.2        | 2.6   | .059   | .098  |
| b              | 1.0        | 1.4   | .040   | .055  |
| b <sub>1</sub> | 1.65       | 2.13  | .065   | .084  |
| b <sub>2</sub> | 2.87       | 3.12  | .113   | .123  |
| C              | .4         | .8    | .016   | .031  |
| D              | 20.80      | 21.46 | .819   | .845  |
| E              | 15.75      | 16.26 | .610   | .640  |
| e              | 5.20       | 5.72  | 0.205  | 0.225 |
| L              | 19.81      | 20.32 | .780   | .800  |
| L1             |            | 4.50  |        | .177  |
| ∅P             | 3.55       | 3.65  | .140   | .144  |
| Q              | 5.89       | 6.40  | 0.232  | 0.252 |
| R              | 4.32       | 5.49  | .170   | .216  |
| S              | 6.15       | BSC   | 242    | BSC   |

**TO-204AA (IXTM) Outline**

Pins 1 - Gate Case - Drain 2 - Source

| Dim.            | Millimeter |       | Inches |      |
|-----------------|------------|-------|--------|------|
|                 | Min.       | Max.  | Min.   | Max. |
| A               | 6.4        | 11.4  | .250   | .450 |
| A <sub>1</sub>  |            | 3.42  |        | .135 |
| ∅b              | .97        | 1.09  | .038   | .043 |
| ∅D              |            | 22.22 |        | .875 |
| e               | 10.67      | 11.17 | .420   | .440 |
| e <sub>1</sub>  | 5.21       | 5.71  | .205   | .225 |
| L               | 7.93       |       | .312   |      |
| ∅p              | 3.84       | 4.19  | .151   | .165 |
| ∅p <sub>1</sub> | 3.84       | 4.19  | .151   | .165 |
| q               | 30.15      | BSC   | 1.187  | BSC  |
| R               |            | 13.33 |        | .525 |
| R <sub>1</sub>  |            | 4.77  |        | .188 |
| s               | 16.64      | 17.14 | .655   | .675 |

Fig. 1 Output Characteristics

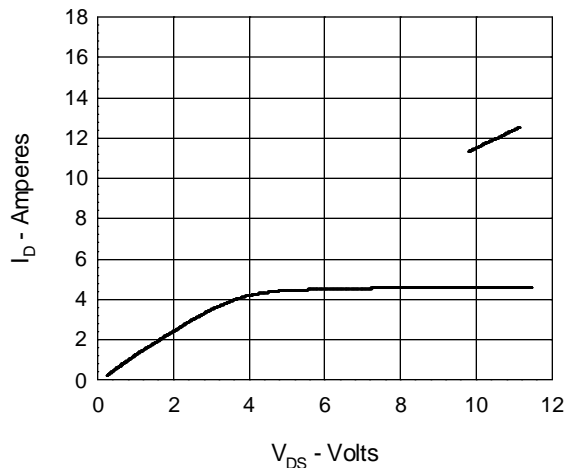


Fig. 2 Input Admittance

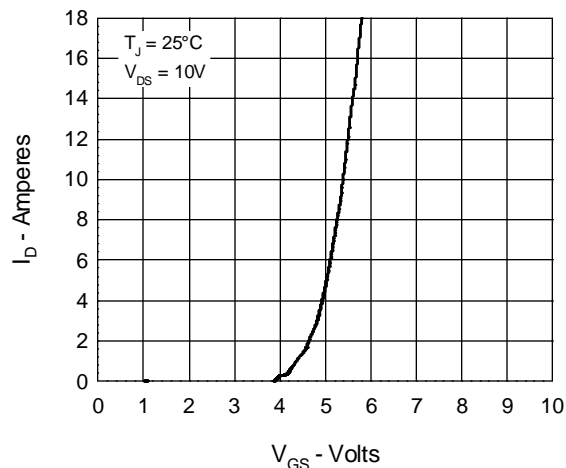


Fig. 3  $R_{DS(on)}$  vs. Drain Current

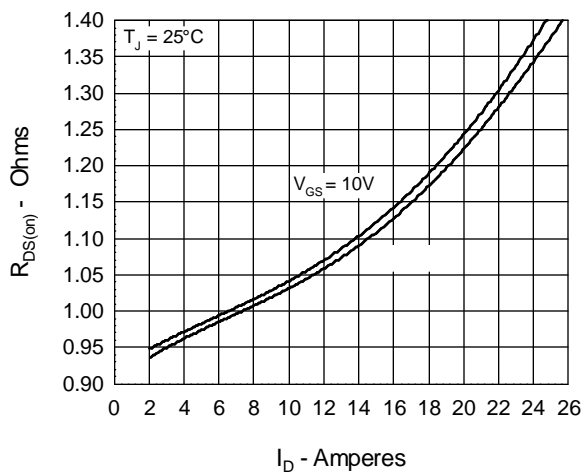


Fig. 4 Temperature Dependence of Drain to Source Resistance

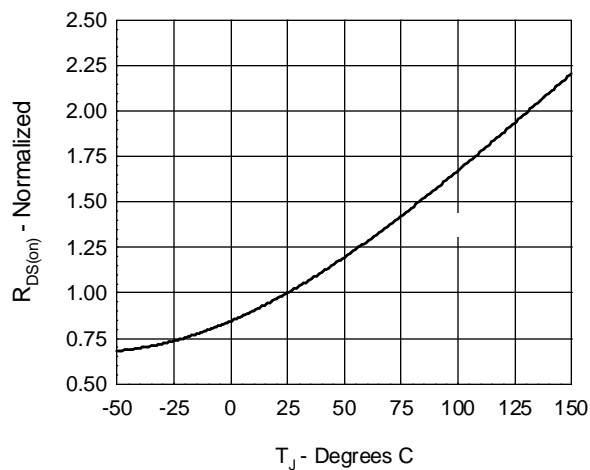


Fig. 5 Drain Current vs. Case Temperature

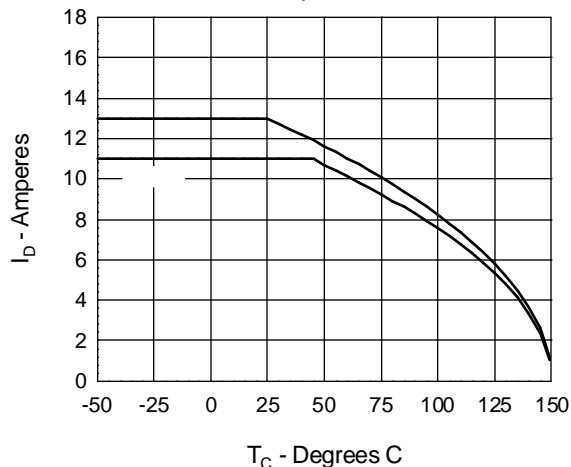
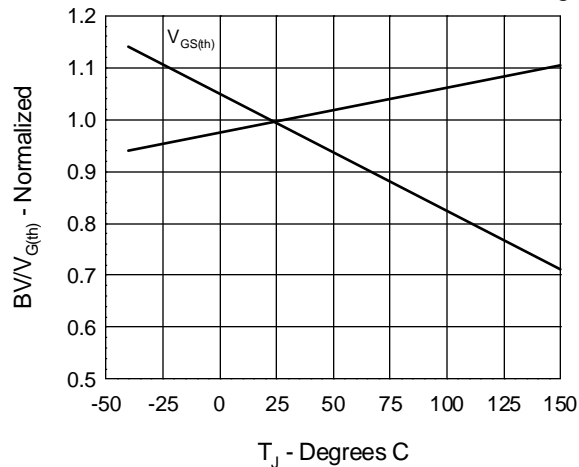


Fig. 6 Temperature Dependence of Breakdown and Threshold Voltage



IXYS reserves the right to change limits, test conditions, and dimensions.

Fig.7 Gate Charge Characteristic Curve

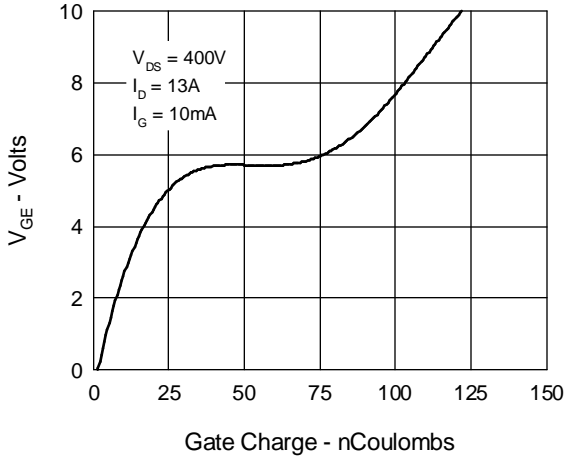


Fig.8 Forward Bias Safe Operating Area

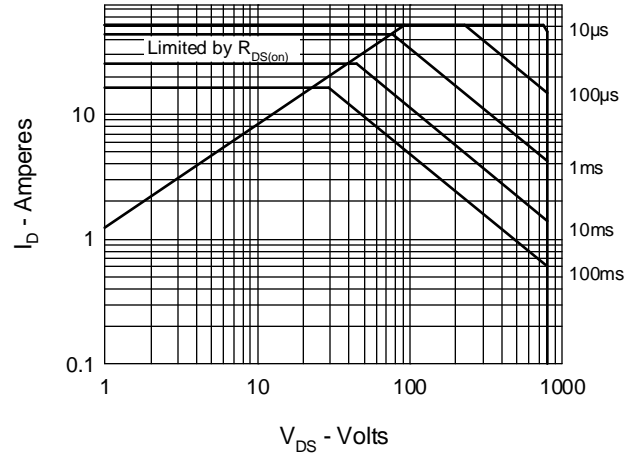


Fig.9 Capacitance Curves

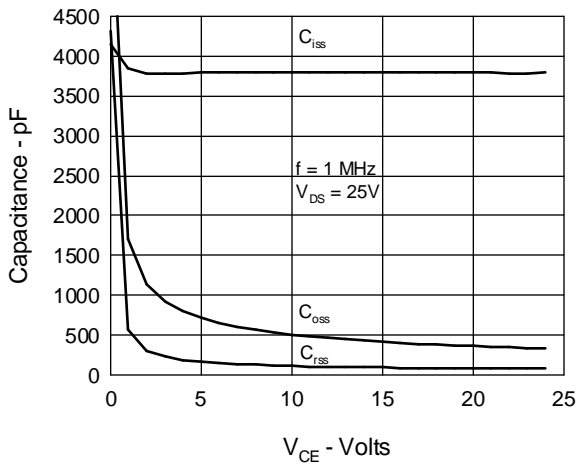


Fig.10 Source Current vs. Source to Drain Voltage

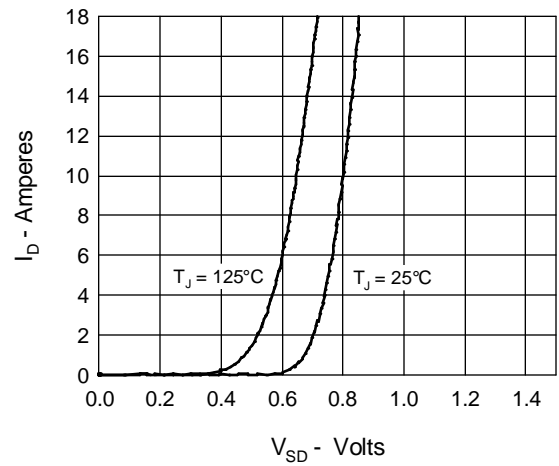
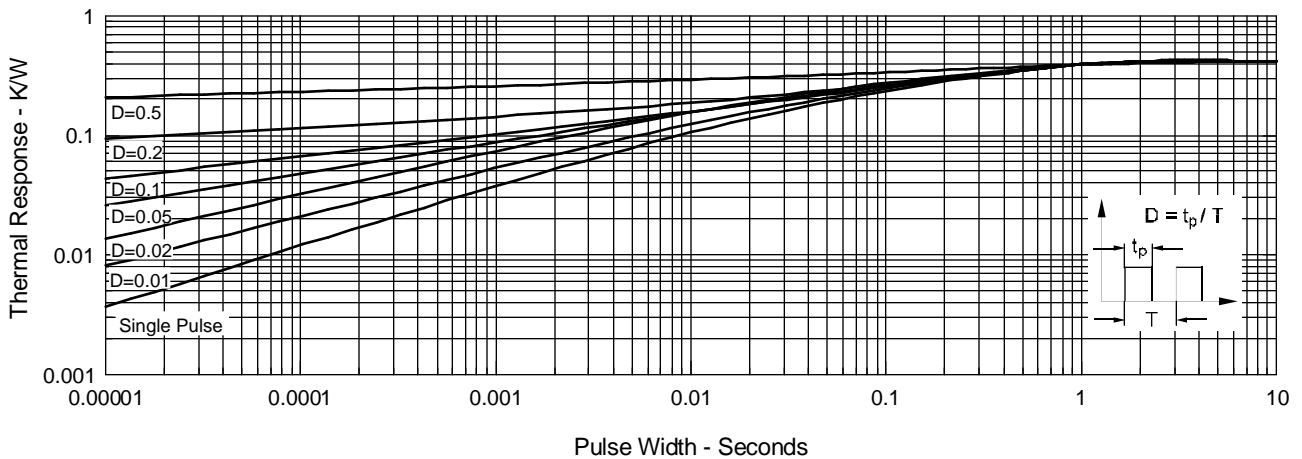


Fig.11 Transient Thermal Impedance



单击下面可查看定价，库存，交付和生命周期等信息

[>>Littelfuse\(美国力特\)](#)