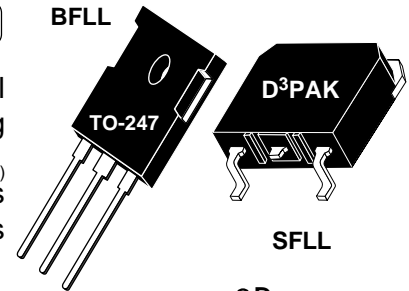
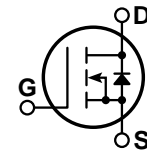


**POWER MOS 7™**
**FREDFET**
**BFLL**

**SFLL**


Power MOS 7™ is a new generation of low loss, high voltage, N-Channel enhancement mode power MOSFETS. Both conduction and switching losses are addressed with Power MOS 7™ by significantly lowering  $R_{DS(ON)}$  and  $Q_g$ . Power MOS 7™ combines lower conduction and switching losses along with exceptionally fast switching speeds inherent with APT's patented metal gate structure.

- Lower Input Capacitance
- Lower Miller Capacitance
- Lower Gate Charge,  $Q_g$
- Increased Power Dissipation
- Easier To Drive
- TO-247 or Surface Mount D³PAK Package
- **FAST RECOVERY BODY DIODE**

**MAXIMUM RATINGS**

 All Ratings:  $T_C = 25^\circ\text{C}$  unless otherwise specified.

| Symbol         | Parameter  | APT5024    | UNIT  |
|----------------|--|------------|-------|
| $V_{DSS}$      | Drain-Source Voltage   | 500        | Volts |
| $I_D$          | Continuous Drain Current @ $T_C = 25^\circ\text{C}$            | 22         | Amps  |
| $I_{DM}$       | Pulsed Drain Current <sup>①</sup>                              | 88         |       |
| $V_{GS}$       | Gate-Source Voltage Continuous                                 | ±30        | Volts |
| $V_{GSM}$      | Gate-Source Voltage Transient                                  | ±40        |       |
| $P_D$          | Total Power Dissipation @ $T_C = 25^\circ\text{C}$             | 265        | Watts |
|                | Linear Derating Factor   | 2.12       | W/°C  |
| $T_J, T_{STG}$ | Operating and Storage Junction Temperature Range               | -55 to 150 | °C    |
| $T_L$          | Lead Temperature: 0.063" from Case for 10 Sec.                 | 300        |       |
| $I_{AR}$       | Avalanche Current <sup>①</sup> (Repetitive and Non-Repetitive) | 22         | Amps  |
| $E_{AR}$       | Repetitive Avalanche Energy <sup>①</sup>                       | 30         | mJ    |
| $E_{AS}$       | Single Pulse Avalanche Energy <sup>④</sup>                     | 960        |       |

**STATIC ELECTRICAL CHARACTERISTICS**

| Symbol       | Characteristic / Test Conditions   | MIN | TYP | MAX   | UNIT  |
|--------------|--|-----|-----|-------|-------|
| $BV_{DSS}$   | Drain-Source Breakdown Voltage ( $V_{GS} = 0V, I_D = 250\mu\text{A}$ )                             | 500 |     |       | Volts |
| $I_{D(on)}$  | On State Drain Current <sup>②</sup> ( $V_{DS} > I_{D(on)} \times R_{DS(on)}$ Max, $V_{GS} = 10V$ ) | 22  |     |       | Amps  |
| $R_{DS(on)}$ | Drain-Source On-State Resistance <sup>②</sup> ( $V_{GS} = 10V, 0.5 I_{D[Cont.]}$ )                 |     |     | 0.240 | Ohms  |
| $I_{DSS}$    | Zero Gate Voltage Drain Current ( $V_{DS} = V_{DSS}, V_{GS} = 0V$ )                                |     |     | 250   | μA    |
|              | Zero Gate Voltage Drain Current ( $V_{DS} = 0.8 V_{DSS}, V_{GS} = 0V, T_C = 125^\circ\text{C}$ )   |     |     | 1000  |       |
| $I_{GSS}$    | Gate-Source Leakage Current ( $V_{GS} = \pm 30V, V_{DS} = 0V$ )                                    |     |     | ±100  | nA    |
| $V_{GS(th)}$ | Gate Threshold Voltage ( $V_{DS} = V_{GS}, I_D = 1\text{mA}$ )                                     | 3   |     | 5     | Volts |

 **CAUTION:** These Devices are Sensitive to Electrostatic Discharge. Proper Handling Procedures Should Be Followed.

APT Website - <http://www.advancedpower.com>

