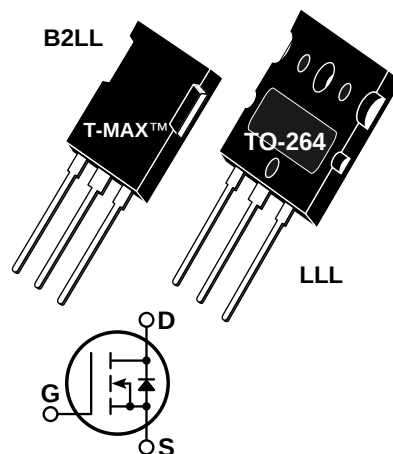


POWER MOS 7™

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
- Popular T-MAX™ or TO-264 Package



MAXIMUM RATINGS

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

Symbol	Parameter	APT6017	UNIT
V_{DSS}	Drain-Source Voltage	600	Volts
I_D	Continuous Drain Current @ $T_C = 25^\circ\text{C}$	35	Amps
I_{DM}	Pulsed Drain Current ^①	140	
V_{GS}	Gate-Source Voltage Continuous	± 30	Volts
V_{GSM}	Gate-Source Voltage Transient	± 40	
P_D	Total Power Dissipation @ $T_C = 25^\circ\text{C}$	500	Watts
	Linear Derating Factor	4.0	W/ $^\circ\text{C}$
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 to 150	$^\circ\text{C}$
T_L	Lead Temperature: 0.063" from Case for 10 Sec.	300	
I_{AR}	Avalanche Current ^① (Repetitive and Non-Repetitive)	35	Amps
E_{AR}	Repetitive Avalanche Energy ^①	35	mJ
E_{AS}	Single Pulse Avalanche Energy ^④	1600	

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage ($V_{GS} = 0V, I_D = 250\mu A$)	600			Volts
$I_{D(on)}$	On State Drain Current ^② ($V_{DS} > I_{D(on)} \times R_{DS(on)}$ Max, $V_{GS} = 10V$)	35			Amps
$R_{DS(on)}$	Drain-Source On-State Resistance ^② ($V_{GS} = 10V, 0.5 I_{D[Cont.]}$)			0.170	Ohms
I_{DSS}	Zero Gate Voltage Drain Current ($V_{DS} = V_{DSS}, V_{GS} = 0V$)			100	μA
	Zero Gate Voltage Drain Current ($V_{DS} = 0.8 V_{DSS}, V_{GS} = 0V, T_C = 125^\circ\text{C}$)			500	
I_{GSS}	Gate-Source Leakage Current ($V_{GS} = \pm 30V, V_{DS} = 0V$)			± 100	nA
$V_{GS(th)}$	Gate Threshold Voltage ($V_{DS} = V_{GS}, I_D = 2.5mA$)	3		5	Volts



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

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

APT6017 B2LL - LLL

SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS

THERMAL CHARACTERISTICS

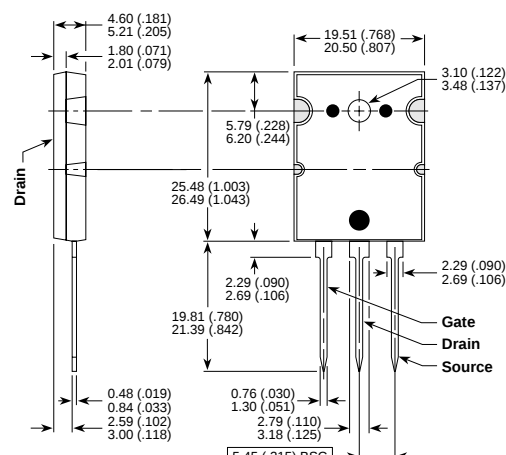
- ① Repetitive Rating: Pulse width limited by maximum junction temperature.
- ② Pulse Test: Pulse width $< 380 \mu\text{s}$, Duty Cycle $< 2\%$

④ Starting $T_i = +25^\circ\text{C}$, $L = 2.61\text{mH}$, $R_G = 25\Omega$, Peak $I_L = 35\text{A}$

⑤ dv/dt numbers reflect the limitations of the test circuit rather than the device itself. $I_S \leq -I_{D[Cont.]}$ $di/dt \leq 700A/\mu s$ $V_R \leq V_{DSS}$ $T_J \leq 150^\circ C$

APT Reserves the right to change, without notice, the specifications and information contained herein.

TO-264 (L) Package Outline



Dimensions in Millimeters and (Inches)

Dimensions in Millimeters and (Inches)