

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Drain-Source Voltage	V _{DSS}	60	V
Gate-Source Voltage	V _{GSS}	±20	V
Continuous Drain Current	I _D	270	mA
Pulsed Drain Current	I _{DM}	3	A

Thermal Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P _D	625	mW
Thermal Resistance, Junction to Ambient (Note 5)	R _{θJA}	200	°C/W
Thermal Resistance, Junction to Leads (Note 6)	R _{θJL}	71	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

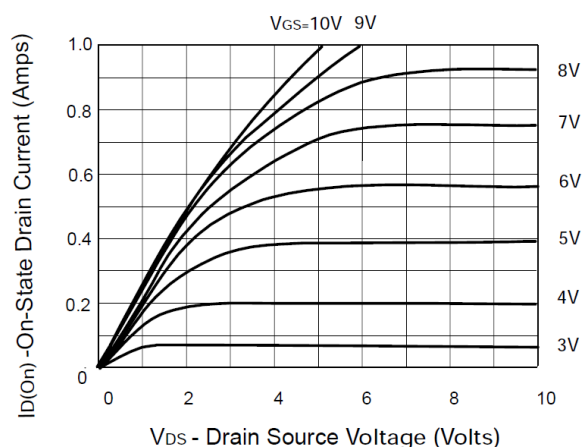
- Notes:
- For a through-hole device mounted on the minimum recommended pad layout with 12mm lead length from the bottom of package to the single-sided FR4 PCB; device is measured under still air conditions whilst operating in a steady-state.
 - Thermal resistance from junction to solder-point at the seating plane (2.5mm from the bottom of package along the drain lead).

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

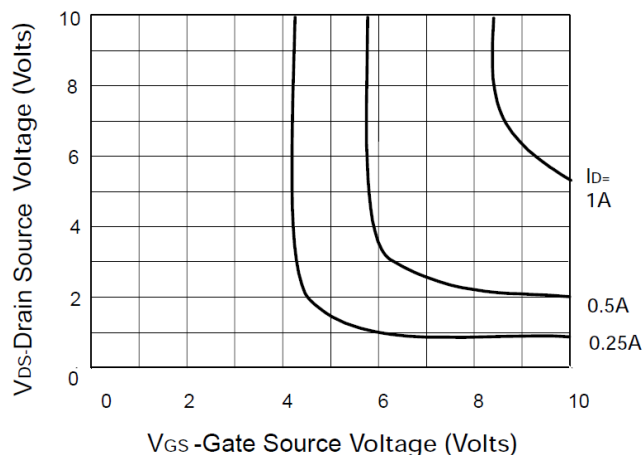
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV _{DSS}	60	—	—	V	I _D = 250μA, V _{GS} = 0V
Zero Gate Voltage Drain Current	I _{DSS}	—	—	10	μA	V _{DS} = 60V, V _{GS} = 0V
Gate-Source Leakage	I _{GSS}	—	—	±100	nA	V _{GS} = ±20V, V _{DS} = 0V
ON CHARACTERISTICS						
On state Drain Current (Note 7)	I _{D(on)}	750	—	—	mA	V _{DS} = 15V, V _{GS} = 10V
Gate Threshold Voltage	V _{GS(th)}	0.8	—	2.5	V	I _D = 1mA, V _{DS} = V _{GS}
Static Drain-Source On-Resistance (Note 7)	R _{DS(on)}	—	—	5.0	Ω	V _{GS} = 10V, I _D = 500mA
				7.5		V _{GS} = 5V, I _D = 200mA
Forward Transconductance (Notes 7 & 9)	g _{fs}	100	—	—	mS	V _{DS} = 15V, I _D = 500mA
DYNAMIC CHARACTERISTICS (Note 9)						
Input Capacitance	C _{iss}	—	—	60	pF	V _{DS} = 25V, V _{GS} = 0V f = 1.0MHz
Output Capacitance	C _{oss}	—	—	25		
Reverse Transfer Capacitance	C _{rss}	—	—	5		
Turn-On Time (Note 8)	t _(on)	—	—	10	ns	V _{DD} = 15V, I _D = 600mA
Turn-Off Time (Note 8)	t _(off)	—	—	10		

- Notes:
- Measured under pulsed conditions. Pulse width ≤ 300μs. Duty cycle ≤ 2%.
 - Switching characteristics are independent of operating junction temperature. Switching times are measured with 50ohm source impedance and <5ns rise time on a pulse generator.
 - For design aid only, not subject to production testing.

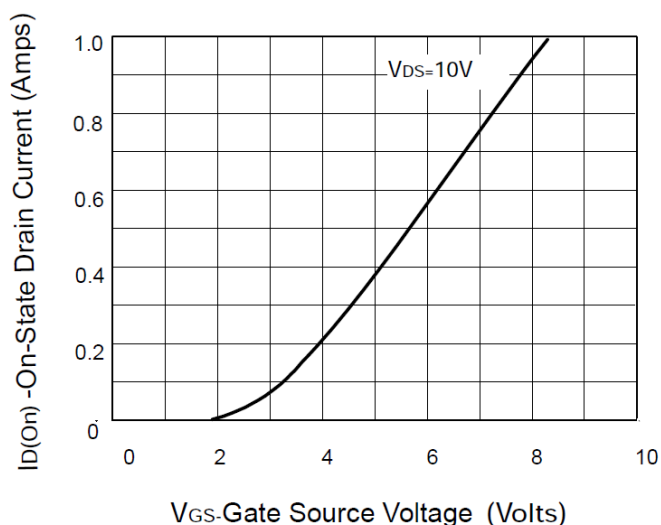
Typical Electrical Characteristics (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)



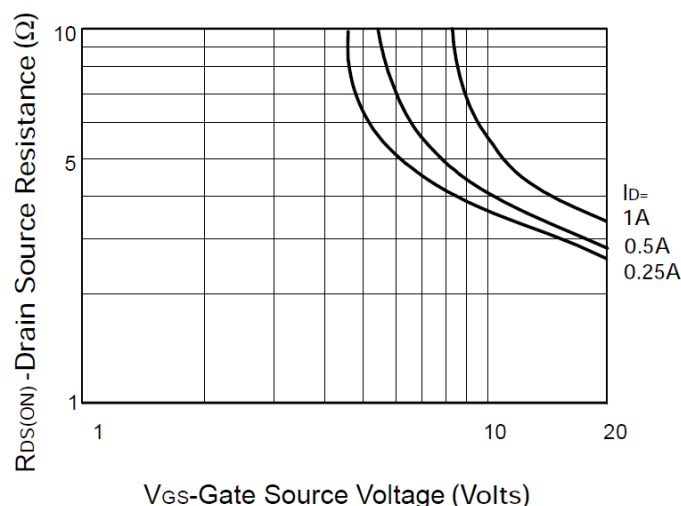
Saturation Characteristics



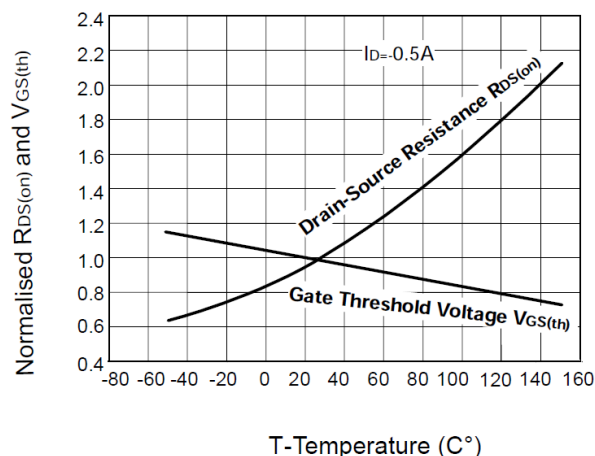
Voltage Saturation Characteristics



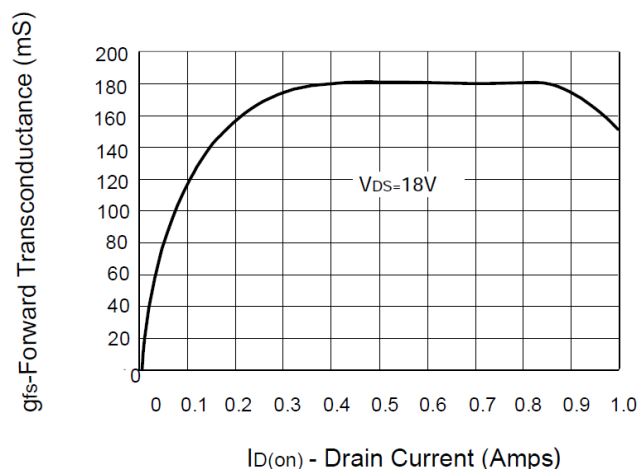
Transfer Characteristics



On-resistance vs gate-source voltage



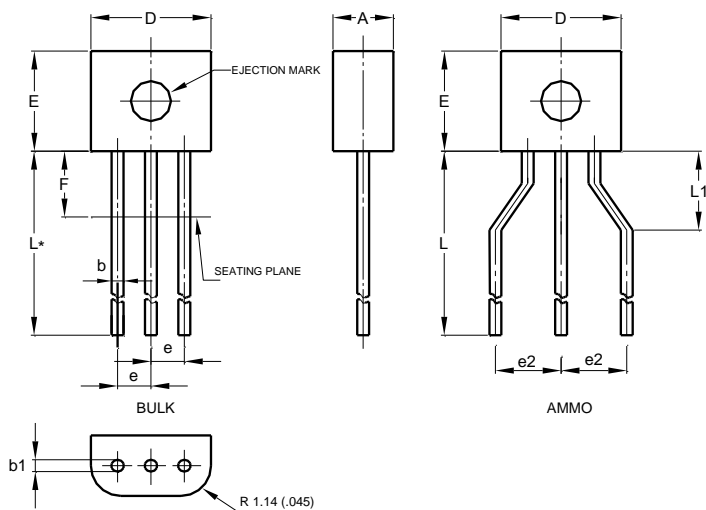
Normalised $R_{DS(on)}$ and $V_{GS(th)}$ vs Temperature



Transconductance v drain current

Package Outline Dimensions

Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



E-Line			
Dim	Min	Max	Typ
A	2.16	2.41	—
b	0.41	0.495	—
b1	0.41	0.495	—
D	4.37	4.77	—
E	3.61	4.01	—
e	—	—	1.27
e2	—	—	2.54
F	—	2.50	—
L	13.00	13.97	—
L1	2.50	3.50	—
All Dimensions in mm			

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