



#### Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	$I_D$
650V	1.2Ω@10V	7A

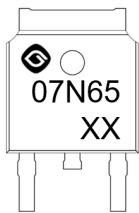
#### Feature

- Trench Technology Power MOSFET
- Low  $R_{DS(ON)}$
- Low Gate Charge
- Low Gate Resistance
- 100% UIS Tested
- 100%  $\Delta V_{DS}$  Tested

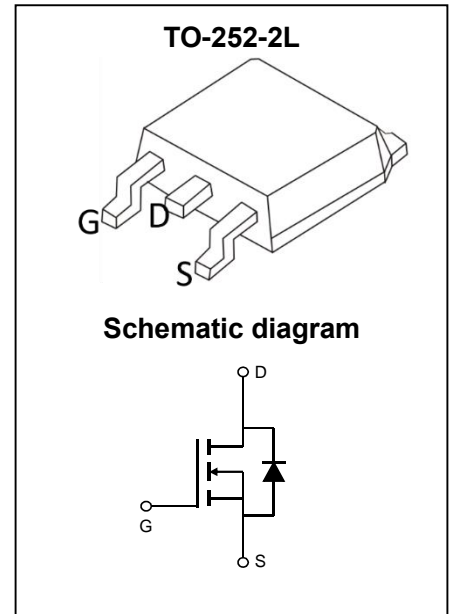
#### Application

- Power Switching Application

#### MARKING:



07N65= Device Code  
XX = Date Code  
Solid Dot = Green Indicator



#### ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain - Source Voltage	$V_{DS}$	650	V
Gate - Source Voltage	$V_{GS}$	±30	V
Continuous Drain Current <sup>1</sup>	$I_D$	7	A
	$T_C = 25^\circ\text{C}$		
Pulsed Drain Current <sup>2</sup>	$I_{DM}$	28	A
Single Pulsed Avalanche Current <sup>3</sup>	$I_{AS}$	17.5	A
Single Pulsed Avalanche Energy <sup>3</sup>	$E_{AS}$	76.5	mJ
Power Dissipation <sup>5</sup>	$P_D$	54	W
	$T_C = 25^\circ\text{C}$		
Thermal Resistance from Junction to Ambient <sup>6</sup>	$R_{\theta JA}$	62.5	$^\circ\text{C/W}$
Thermal Resistance from Junction to Case	$R_{\theta JC}$	2.3	$^\circ\text{C/W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55~ +150	$^\circ\text{C}$

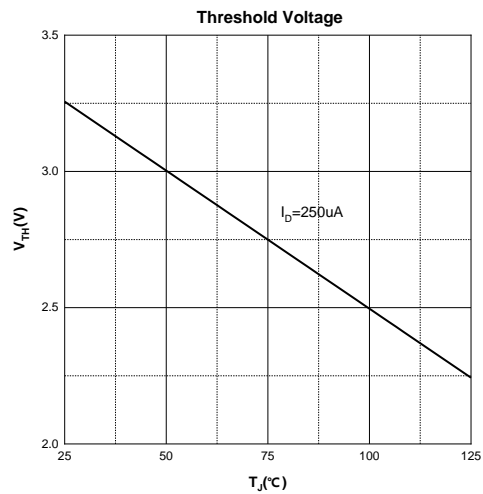
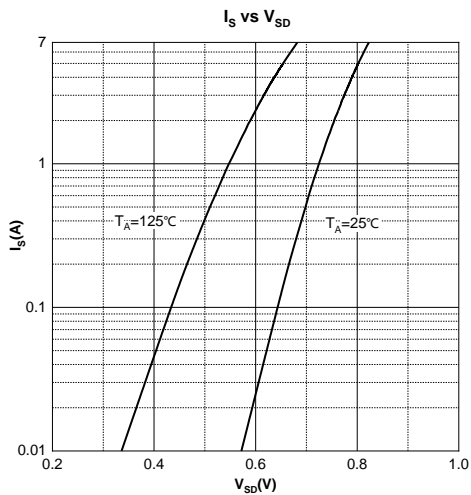
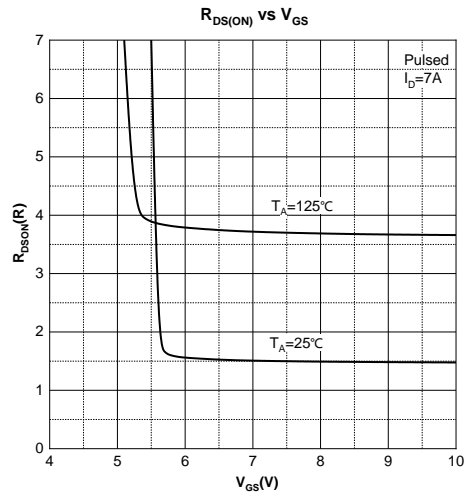
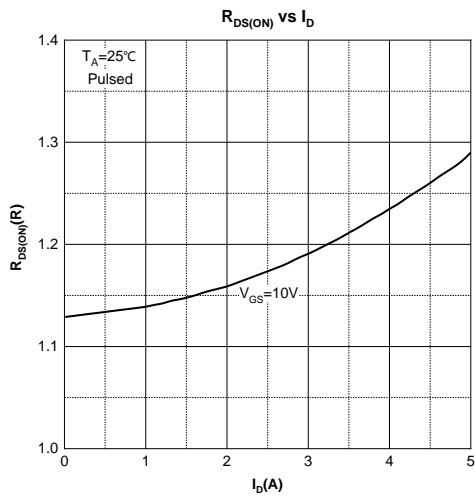
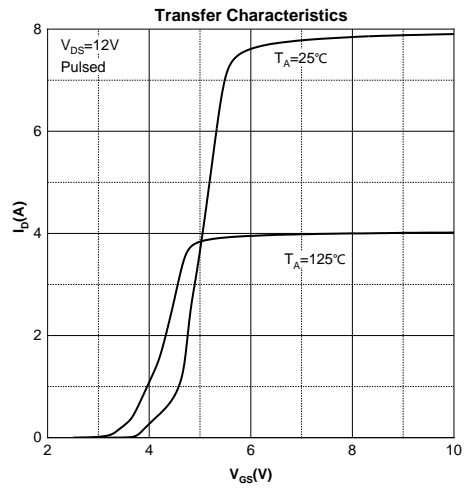
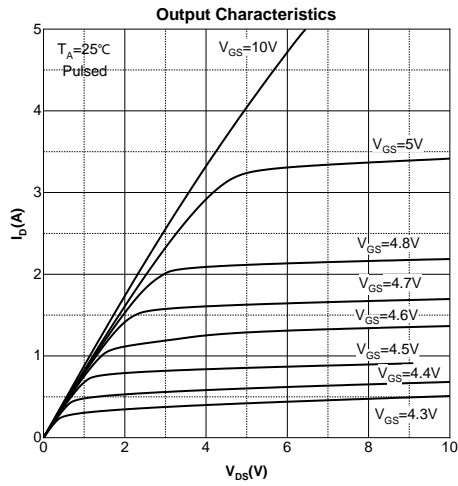
## MOSFET ELECTRICAL CHARACTERISTICS ( $T_J = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>Off Characteristics</b>						
Drain - Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	650			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 650V, V_{GS} = 0V$			1	$\mu A$
Gate - Body Leakage Current	$I_{GSS}$	$V_{GS} = \pm 30V, V_{DS} = 0V$			$\pm 100$	nA
<b>On Characteristics<sup>4</sup></b>						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	2	3.2	4	V
Drain-source On-resistance	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 1A$		1.2	1.7	$\Omega$
Forward Transconductance	$g_{FS}$	$V_{DS} = 5V, I_D = 10A$		16.5		S
<b>Dynamic Characteristics</b>						
Input Capacitance	$C_{iss}$	$V_{DS} = 45V, V_{GS} = 0V, f = 1MHz$		1170		pF
Output Capacitance	$C_{oss}$			63.9		
Reverse Transfer Capacitance	$C_{rss}$			2.6		
Gate Resistance	$R_g$	$V_{DS} = 0V, V_{GS} = 0V, f = 1MHz$		2.1		$\Omega$
<b>Switching Characteristics</b>						
Total Gate Charge	$Q_g$	$V_{DS} = 335V, V_{GS} = 10V, I_D = 1A$		17.1		nC
Gate-source Charge	$Q_{gs}$			0.6		
Gate-drain Charge	$Q_{gd}$			3.6		
Turn-on Delay Time	$t_{d(on)}$	$V_{DD} = 300V, I_D = 2A, R_G = 25\Omega$		33.6		ns
Turn-on Rise Time	$t_r$			7.2		
Turn-off Delay Time	$t_{d(off)}$			64		
Turn-off Fall Time	$t_f$			31.2		
<b>Source - Drain Diode Characteristics</b>						
Diode Forward Voltage <sup>4</sup>	$V_{SD}$	$V_{GS} = 0V, I_S = 2A$			1.2	V

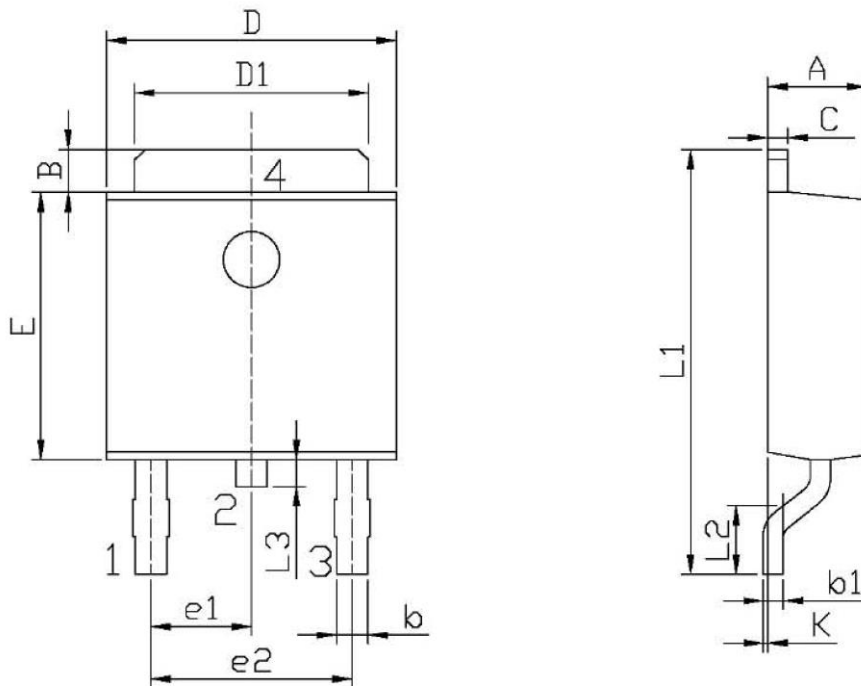
Notes :

- 1.The maximum current rating is limited by package.And device mounted on a large heatsink
- 2.Pulse Test : Pulse Width  $\leq 10\mu s$ , duty cycle  $\leq 1\%$ .
- 3.EAS condition:  $V_{DD} = 100V, V_{GS} = 10V, L = 0.5mH, R_G = 25\Omega$  Starting  $T_J = 25^\circ\text{C}$ .
- 4.Pulse Test : Pulse Width  $\leq 300\mu s$ , duty cycle  $\leq 2\%$ .
- 5.The power dissipation  $P_D$  is limited by  $T_{J(MAX)} = 150^\circ\text{C}$ .And device mounted on a large heatsink
- 6.Device mounted on  $1in^2$  FR-4 board with 2oz. Copper, in a still air environment with  $T_A = 25^\circ\text{C}$ .

**Typical Characteristics**



## TO-252-2L Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
B	0.950	1.250	0.037	0.049
b	0.500	0.700	0.020	0.028
b1	0.450	0.550	0.018	0.022
C	0.450	0.550	0.018	0.022
D	6.450	6.750	0.254	0.266
D1	5.100	5.500	0.201	0.217
E	5.950	6.250	0.234	0.246
e1	2.240	2.340	0.088	0.092
e2	4.430	4.730	0.174	0.186
L1	9.450	9.950	0.372	0.392
L2	1.250	1.750	0.049	0.069
L3	0.600	0.900	0.024	0.035
K	0.000	0.100	0.000	0.004

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)