



#### Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	$I_D$
100V	76mΩ@10V	15A

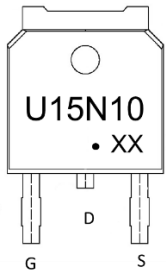
#### Feature

- Excellent package for good heat dissipation
- Low reverse transfer capacitance
- Fast switching capability

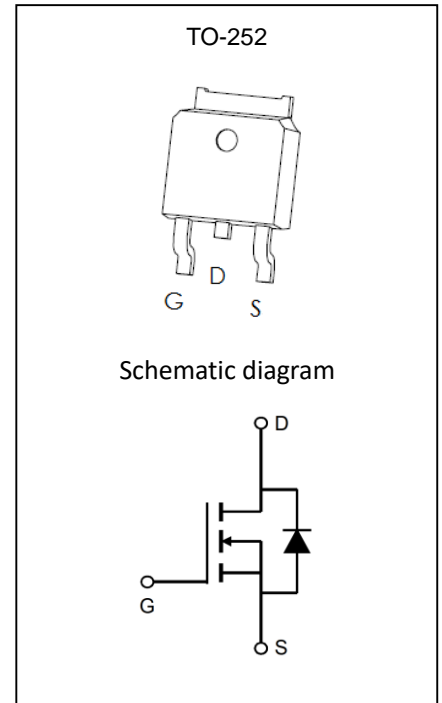
#### Application

- Power switching application

#### MARKING:



U15N10 = Device Code  
XX = Date Code



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	100	V
Gate-Source Voltage	$V_{GS}$	±20	V
Continuous Drain Current	$I_D$	15	A
Pulsed Drain Current	$I_{DM}$	45	A
Single Pulsed Avalanche Energy <sup>1</sup>	$E_{AS}$	12	mJ
Power Dissipation	$P_D$	1.25	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	100	°C/W
Junction Temperature	$T_J$	150	°C
Storage Temperature	$T_{STG}$	-55~ +150	°C

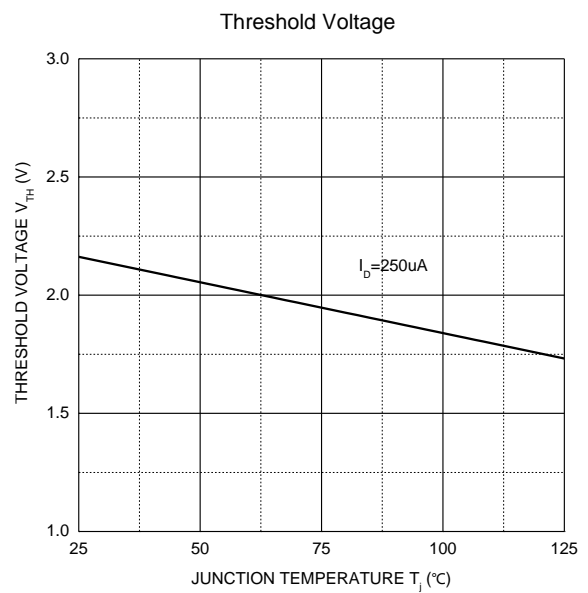
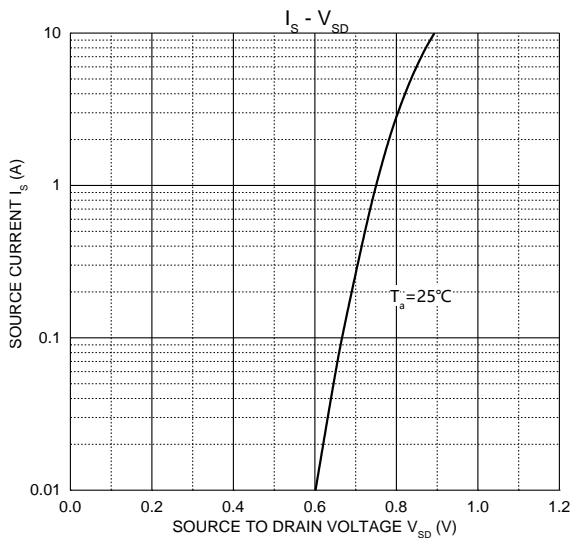
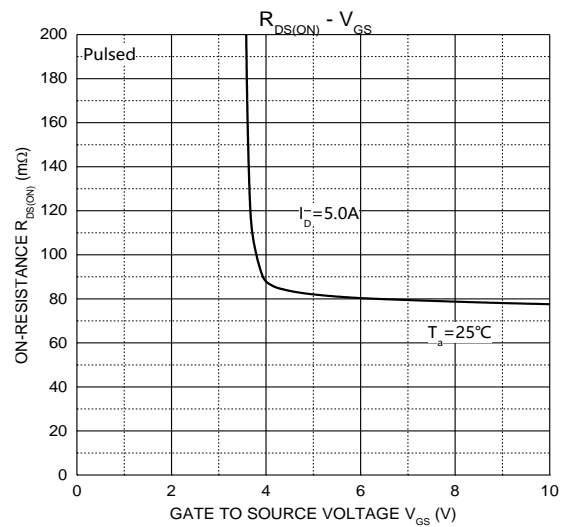
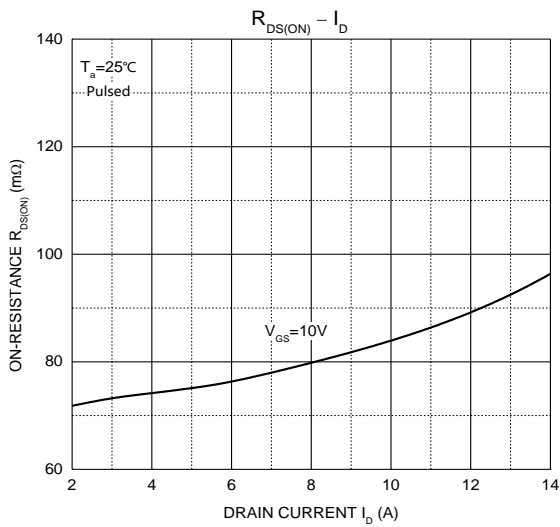
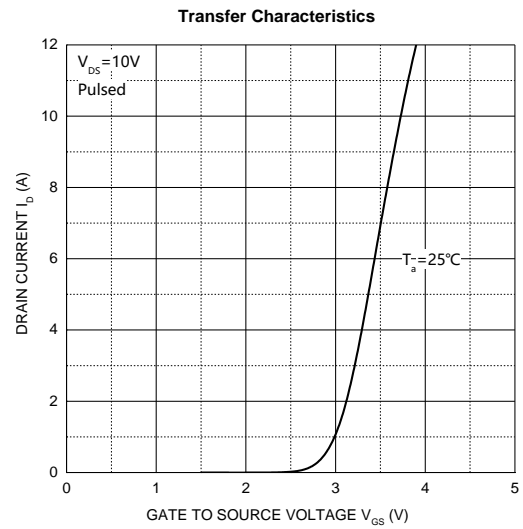
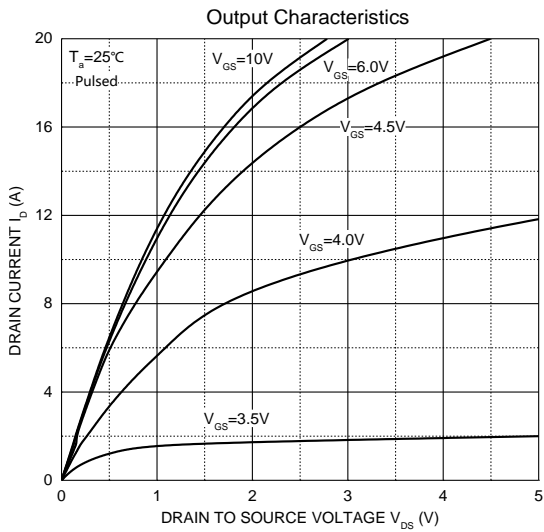
## MOSFET ELECTRICAL CHARACTERISTICS( $T_C=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>Static Characteristics</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	100			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = 80V, V_{GS} = 0V$			1	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{GS} = \pm 20V, V_{DS} = 0V$			$\pm 100$	nA
Gate threshold voltage <sup>2</sup>	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.0	2.0	3.0	V
Drain-source on-resistance <sup>2</sup>	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 8A$		76	105	m $\Omega$
<b>Dynamic characteristics<sup>3</sup></b>						
Input Capacitance	$C_{iss}$	$V_{DS} = 30V, V_{GS} = 0V, f = 1MHz$		580		pF
Output Capacitance	$C_{oss}$			50		
Reverse Transfer Capacitance	$C_{rss}$			40		
<b>Switching Characteristics<sup>3</sup></b>						
Total Gate Charge@10V	$Q_g$	$V_{DS} = 30V, V_{GS} = 10V, I_D = 3A$		17		nC
Gate-Source Charge	$Q_{gs}$			4		
Gate-Drain Charge	$Q_{gd}$			5		
Turn-on delay time	$t_{d(on)}$	$V_{DD} = 30V, V_{GS} = 10V, R_G = 2.5\Omega, I_D = 2A, R_L = 15\Omega$		13		ns
Turn-on rise time	$t_r$			8		
Turn-off delay time	$t_{d(off)}$			25		
Turn-off fall time	$t_f$			11		
<b>Diode Characteristics<sup>2</sup></b>						
Diode Forward Voltage	$V_{SD}$	$V_{GS} = 0V, I_S = 8A,$		0.85	1.2	V

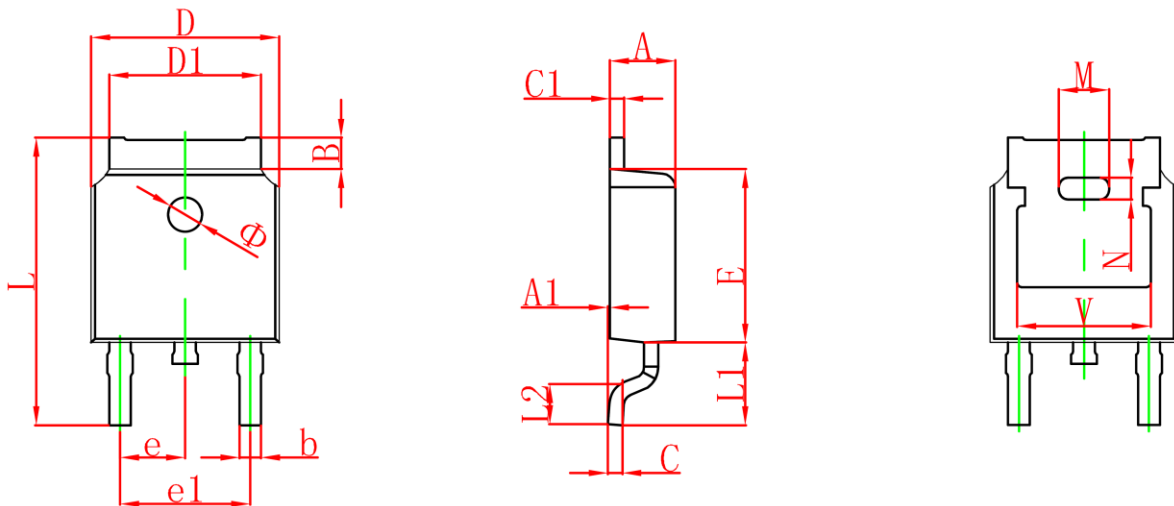
Note :

- $V_{DD} = 25V, V_{GS} = 10V, L = 0.5mH, I_{AS} = 7A, \text{Starting } T_J = 25^\circ\text{C}.$
- Pulse Test : Pulse width  $\leq 300\mu s,$  duty cycle  $\leq 2\%.$
- Guaranteed by design, not subject to production

**Typical Electrical and Thermal Characteristics**



## TO-252 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.380	0.087	0.094
A1	0.000	0.100	0.000	0.004
B	0.800	1.400	0.031	0.055
b	0.710	0.810	0.028	0.032
c	0.460	0.560	0.018	0.022
c1	0.460	0.560	0.018	0.022
D	6.500	6.700	0.256	0.264
D1	5.130	5.460	0.202	0.215
E	6.000	6.200	0.236	0.244
e	2.286 TYP.		0.090 TYP.	
e1	4.327	4.727	0.170	0.186
M	1.778REF.		0.070REF.	
N	0.762REF.		0.018REF.	
L	9.800	10.400	0.386	0.409
L1	2.9REF.		0.114REF.	
L2	1.400	1.700	0.055	0.067
V	4.830 REF.		0.190 REF.	
Φ	1.100	1.300	0.043	0.051

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)