

### Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	$I_D$
100V	100mΩ@10V	3A
	120mΩ@4.5V	

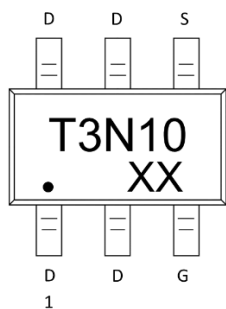
### Feature

- High density cell design for ultra low  $R_{DS(on)}$
- Excellent package for good heat dissipation
- low gate charge

### Application

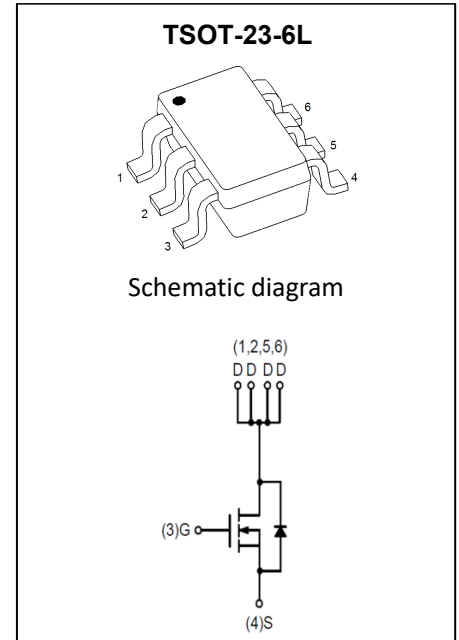
- Power switching application
- Hard switching and high frequency circuits
- Uninterruptible power supply

### MARKING:



Notes:

- 1、T3N10=Device Code
- 2、XX=Date Code



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	100	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_D$	3	A
Plused Drain Current <sup>(1)</sup>	$I_{DM}$	20	A
Power Dissipation	$P_D$	0.35	W
Thermal Resistance from Junction to Ambient <sup>(2)</sup>	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55~ +150	$^\circ\text{C}$

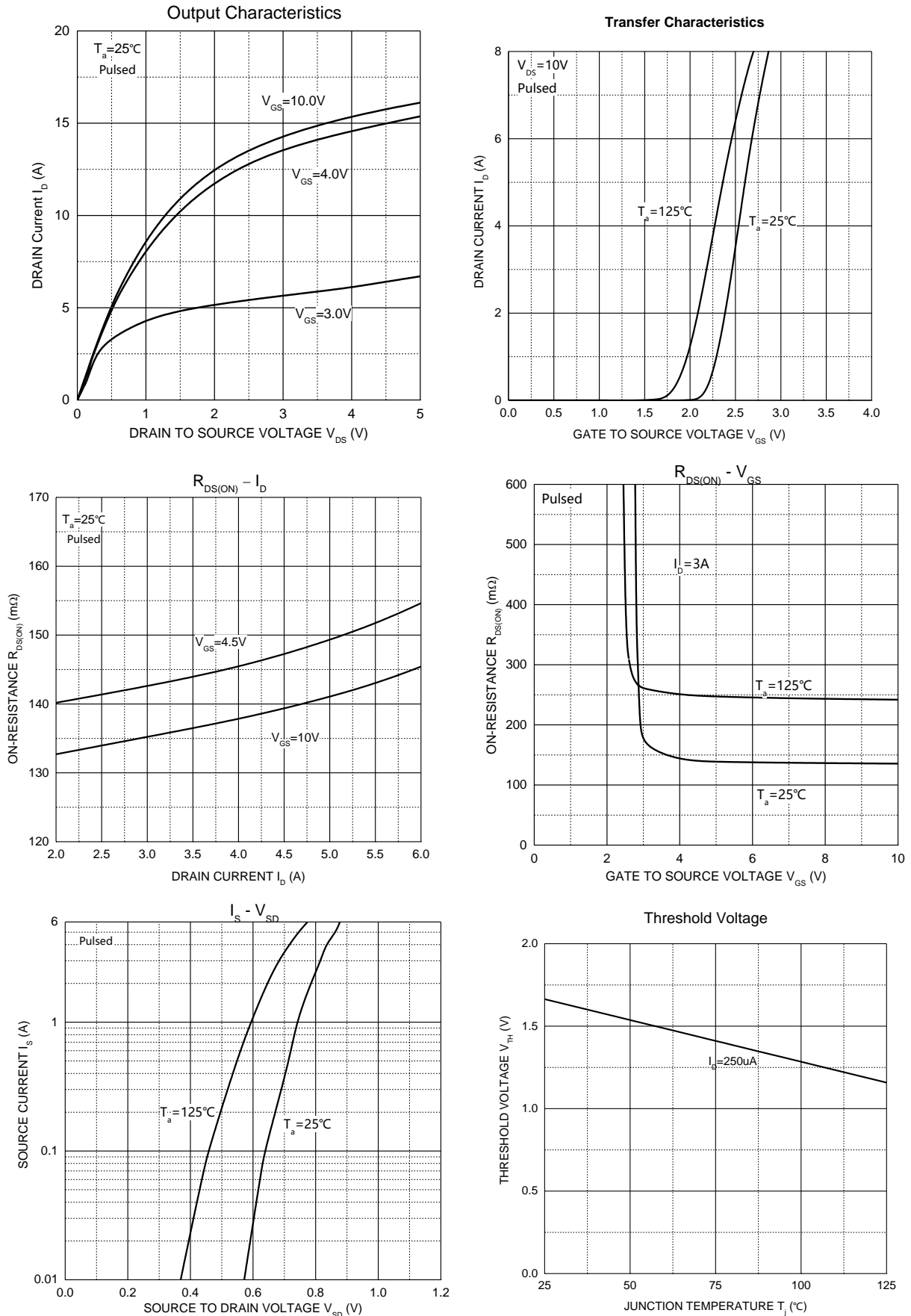
## MOSFET ELECTRICAL CHARACTERISTICS( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

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	$I_{DSS}$	$V_{DS} = 100V, V_{GS} = 0V$			1	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{GS} = \pm 20V, V_{DS} = 0V$			$\pm 100$	nA
Gate threshold voltage <sup>(3)</sup>	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1	2	3	V
Drain-source on-resistance <sup>(3)</sup>	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 3A$		100	140	m $\Omega$
		$V_{GS} = 4.5V, I_D = 2A$		120	190	
Forward transconductance <sup>(3)</sup>	$g_{FS}$	$V_{DS} = 5V, I_D = 3A$	3			S
<b>Dynamic characteristics<sup>(4)</sup></b>						
Input Capacitance	$C_{iss}$	$V_{DS} = 25V, V_{GS} = 0V, f = 1MHz$		607		pF
Output Capacitance	$C_{oss}$			38		
Reverse Transfer Capacitance	$C_{rss}$			20		
<b>Switching characteristics<sup>(4)</sup></b>						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = 10V, V_{DS} = 30V,$ $R_{GEN} = 2.5\Omega, I_D = 2A, R_L = 15\Omega$		9.7		ns
Turn-on rise time	$t_r$			6.5		
Turn-off delay time	$t_{d(off)}$			31		
Turn-off fall time	$t_f$			8		
Total Gate Charge	$Q_g$	$V_{DS} = 30V, V_{GS} = 10V, I_D = 3A$		13.7		nC
Gate-Source Charge	$Q_{gs}$			3.1		
Gate-Drain Charge	$Q_{gd}$			4.5		
<b>Source-Drain Diode characteristics</b>						
Diode Forward voltage <sup>(3)</sup>	$V_{DS}$	$V_{GS} = 0V, I_S = 1A$		0.73	1.2	V

### Notes:

1. Repetitive rating : Pulse width limited by junction temperature.
2. Surface mounted on FR4 board ,  $t \leq 10s$ .
3. Pulse Test : Pulse Width  $\leq 300\mu s$ , Duty Cycle  $\leq 2\%$ .
4. Guaranteed by design, not subject to producing.

## Typical Electrical and Thermal Characteristics



## TSOT-23-6L Package Information

标注/ SYMBOL	尺寸/ SIZE	最小/MIN(mm)	最大/MAX(mm)	标注/ SYMBOL	尺寸/ SIZE	最小/MIN(mm)	最大/MAX(mm)
A		2.820	3.020	C1		0.000	0.100
A1		0.950 (BSC)		C2		0.378	0.438
A2		0.350	0.500	D		0.300	0.600
B		1.600	1.700	$\theta$		9° TYP4	
B1		2.650	2.950	$\theta 1$		10° TYP4	
B2		0.080	0.200	$\theta 2$		0~8°	
C		0.700	0.800				

