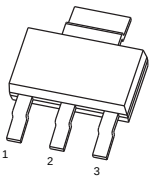
N-Channel Power MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
150V	160mΩ@10V	4A

SOT-223



1. GATE
2. DRAIN
3. SOURCE

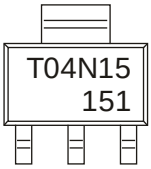
GENERAL DESCRIPTION

This FTK04N15T use advanced trench technology and design to provide excellent $R_{DS(ON)}$ with low gate charge. It can be used in a wide variety of applications.

FEATURE

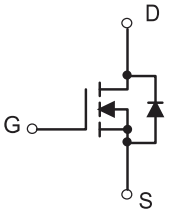
- High density cell design for ultra low $R_{DS(ON)}$
- Fully characterized avalanche voltage and current
- Excellent package for good heat dissipation

MARKING



T04N15= Device code
151=Code

EQUIVALENT CIRCUIT



Maximum ratings (Ta=25℃ unless other wise oted)

Parameter	Symbol	Value	Unit
Drain- Source Voltage	V_{DS}	150	V
Gate- Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	4	A
Pulsed Drain Current(note1)	I_{DM}	16	
Thermal Resistance from Junction to Ambient	$R_{\Theta JA}$	125	℃/W
JunctionTemperature	T_J	150	℃
Storage Temperature Range	T_{STG}	- 55~ +150	
Maximum lead temperure for soldering purposes , 1/8”from case for 5 seconds	T_L	260	

Electrical characteristics (T_a=25℃ unless otherwise noted)

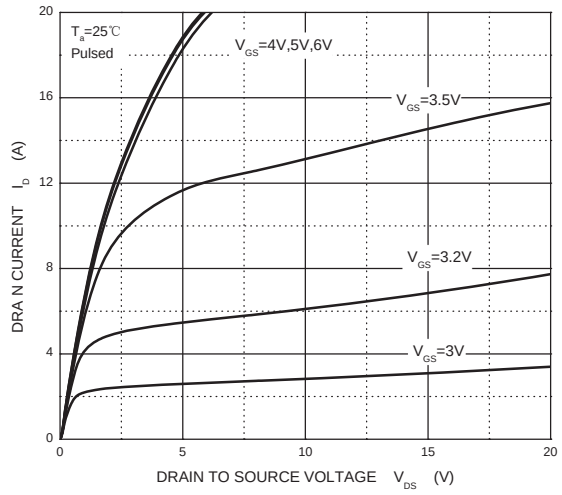
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS}= 0V, I_D =250μA	150			V
Drain-source diode forward voltage(note2)	V_{SD}	V_{GS} = 0V, I_S=2.0A			1.2	
Zero gate voltage drain current	I_{DSS}	V_{DS} =150V, V_{GS} =0V			1	μA
Gate-body leakage current (note2)	I_{GSS}	V_{DS} =0V, V_{GS} =±20V			±100	nA
On characteristics (note2)						
Gate-threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	1.5	2.0	2.5	V
Static drain-source on-resistance	$R_{DS(on)}$	V_{GS} =10V, I_D=4.0A		130	160	mΩ
Forward transconductance	g_{fs}	V_{DS} =15V, I_D =4A	5			S
Dynamic characteristics (note 3)						
Input capacitane	C_{iss}	V_{DS} =25V,V_{GS} =0V,f =1MHz		900		pF
Output capacitance	C_{oss}			115		
Reverse transfer capacitance	C_{rss}			70		
Switching characteristics (note 3)						
Total gate charge	Q_g	V_{DS} =75V,V_{GS} =10V,I_D=1.5A		19		nC
Gate-source charge	Q_{gs}			5.5		
Gate-drain charge	Q_{gd}			7		
Turn-on delay time (note3)	$t_{d(on)}$	V_{DS}=75V, V_{GS}=10V, R_G=6Ω, I_D =1.0A,R_L=75Ω		8		ns
Turn-on rise time (note3)	t_r			10		
Turn-off delay time (note3)	$t_{d(off)}$			20		
Turn-off fall time (note3)	t_f			15		

Notes :

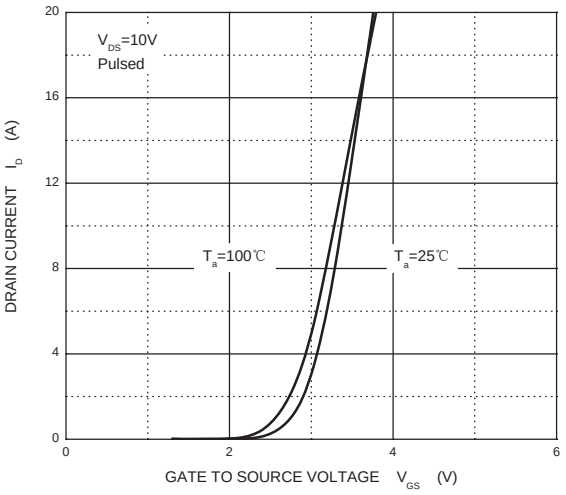
1. Repetitive Rating:Pulse width limited by maximum junction temperature.
2. Pulse Test : Pulse width≤300μs, duty cycle ≤2%.
3. These parameters have no way to verify.

Typical Electrical and Thermal Characteristics (Curves)

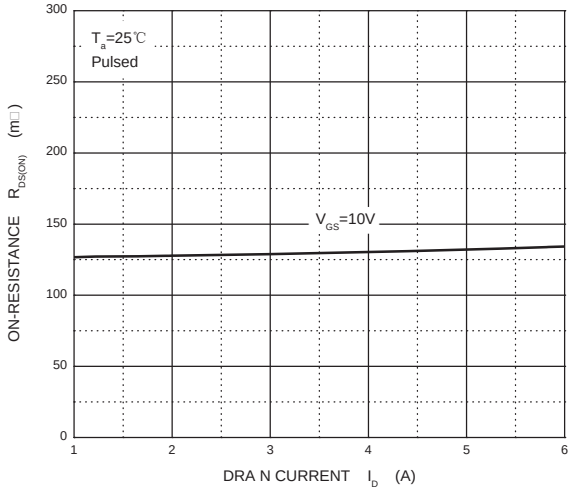
Output Characteristics



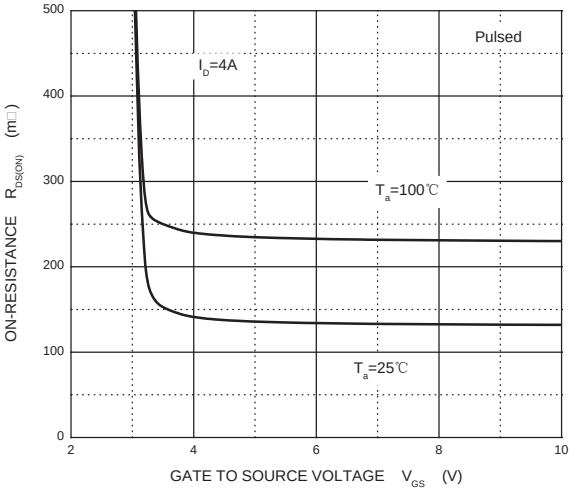
Transfer Characteristics



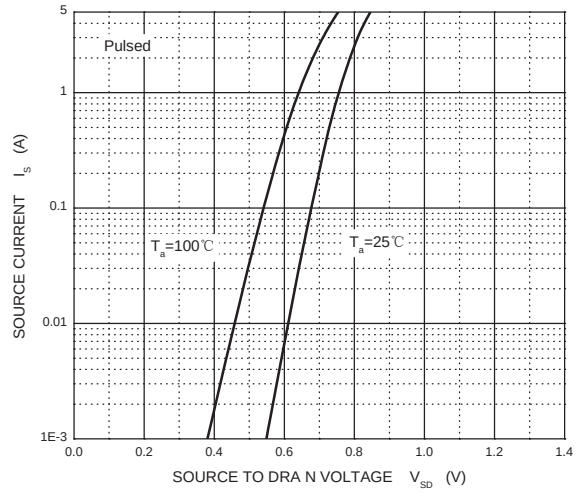
RDS(ON) —— ID



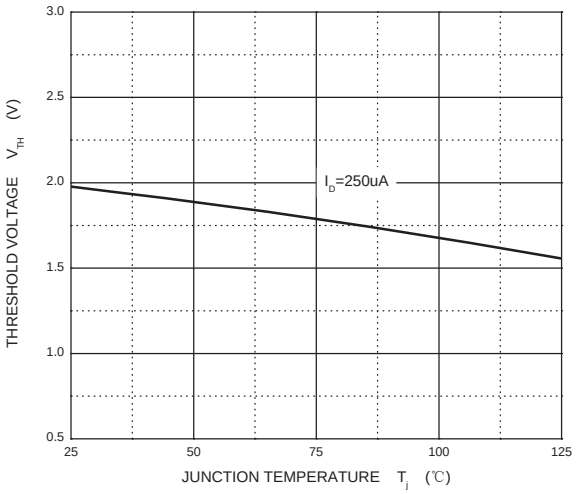
RDS(ON) —— VGS



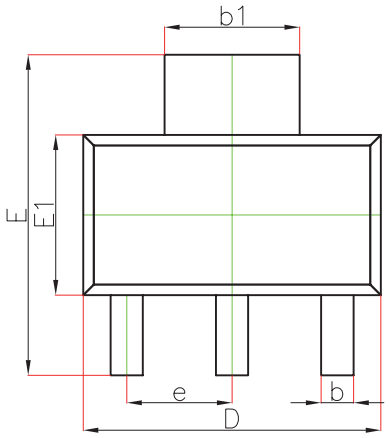
IS —— VSD

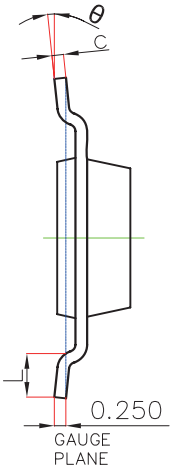


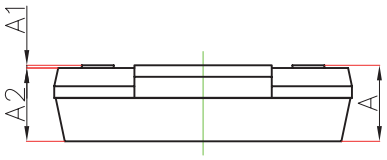
Threshold Voltage



SOT-223 Package Outline Dimensions

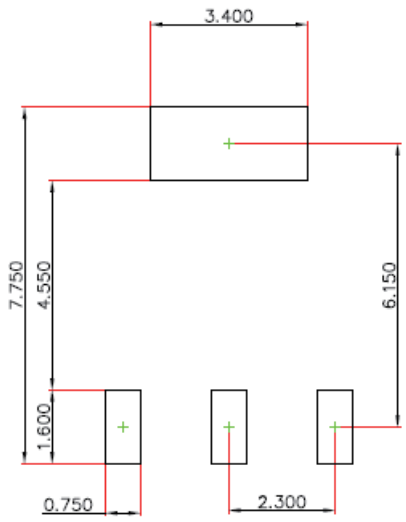






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	——	1.800	——	0.071
A1	0.020	0.100	0.001	0 004
A2	1.500	1.700	0.059	0 067
b	0.660	0.840	0.026	0 033
b1	2.900	3.100	0.114	0.122
c	0.230	0.350	0.009	0 014
D	6.300	6.700	0.248	0.264
E	6.700	7.300	0.264	0.287
E1	3.300	3.700	0.130	0.146
e	2.300(BSC)		0.091(BSC)	
L	0.750	——	0.030	——
θ	0°	10°	0°	10°

SOT-223 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.050mm.
3.The pad layout is for reference purposes only.