



Product Summary

V _{(BR)DSS}	R _{DS(on)TYP}	I _D
40V	2.8mΩ@10V	85A
	3.8mΩ@4.5V	

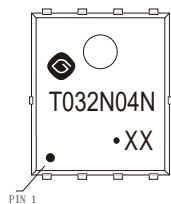
Feature

- Split Gate Trench Technology
- Low R_{DS(ON)}
- Low Gate Charge
- Low Gate Resistance
- 100% UIS Tested

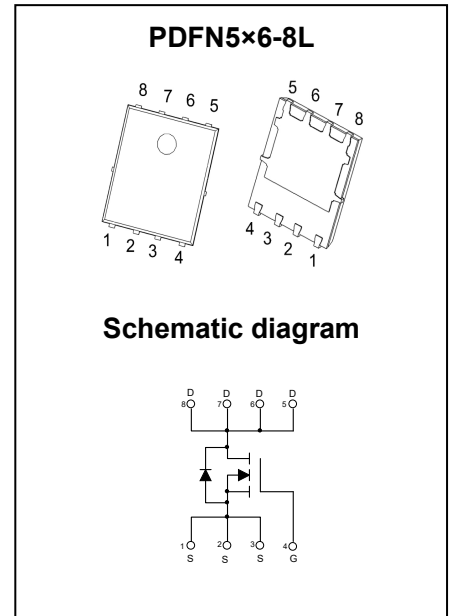
Application

- Power Switching Application

MARKING:



T032N04N = Device Code
XX = Date Code
Solid Dot = Green Indicator



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit	
Drain - Source Voltage	V _{DS}	40	V	
Gate - Source Voltage	V _{GS}	±20	V	
Continuous Drain Current ¹	I _D	T _C = 25°C	85	A
Continuous Drain Current ¹		T _C = 100°C	67	A
Pulsed Drain Current ²	I _{DM}	220	A	
Single Pulsed Avalanche Current ³	I _{AS}	31	A	
Single Pulsed Avalanche Energy ³	E _{AS}	240	mJ	
Power Dissipation ⁵	P _D	T _C = 25°C	83	W
Thermal Resistance from Junction to Ambient ⁶		R _{θJA}	55	°C/W
Thermal Resistance from Junction to Case	R _{θJC}	1.5	°C/W	
Junction Temperature	T _J	150	°C	
Storage Temperature	T _{STG}	-55~ +150	°C	

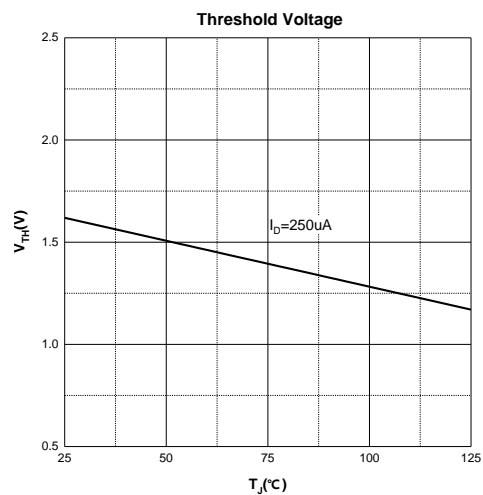
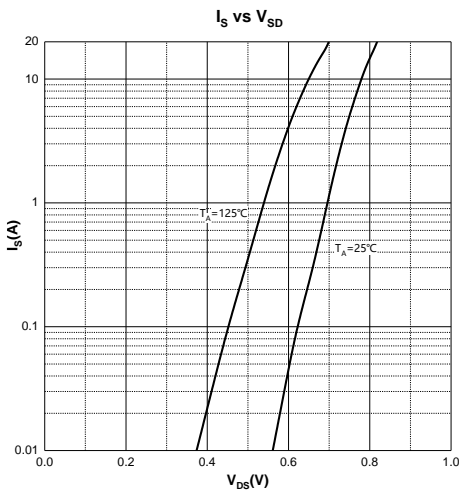
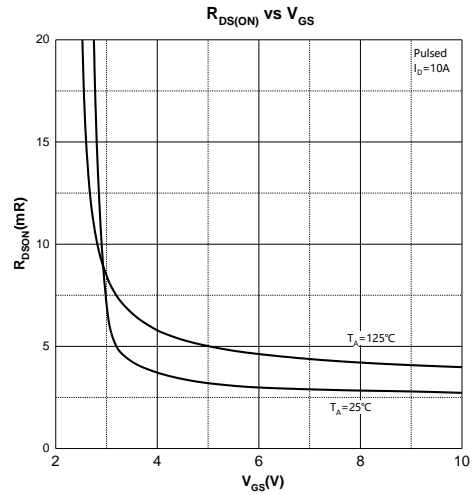
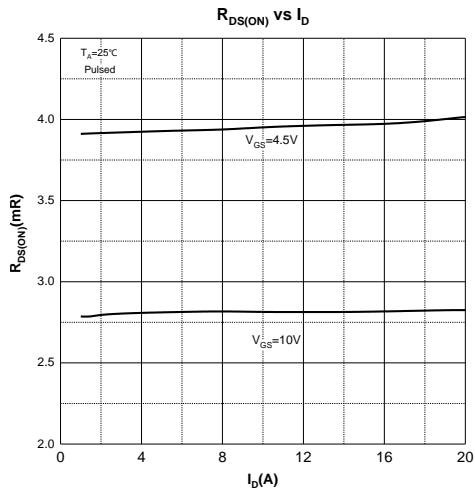
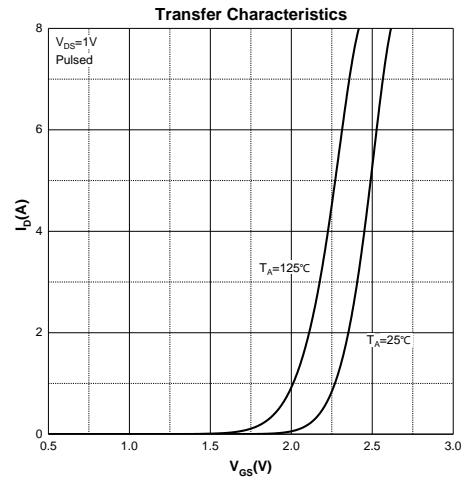
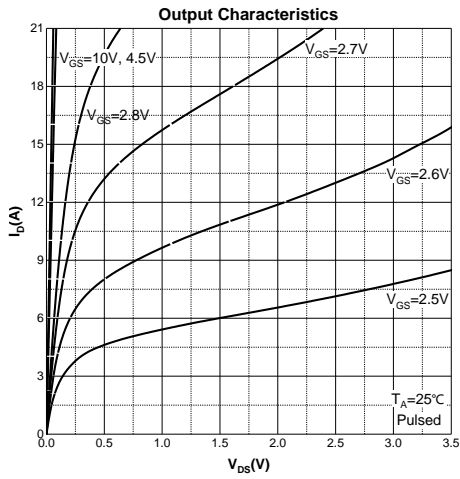
MOSFET ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$ unless otherwise noted)

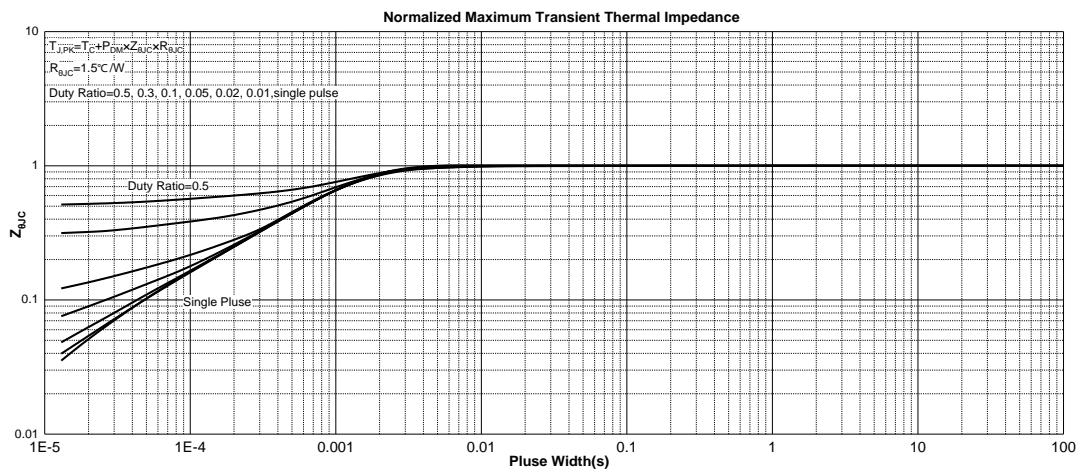
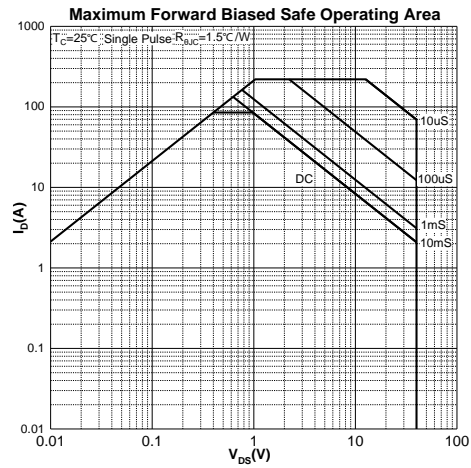
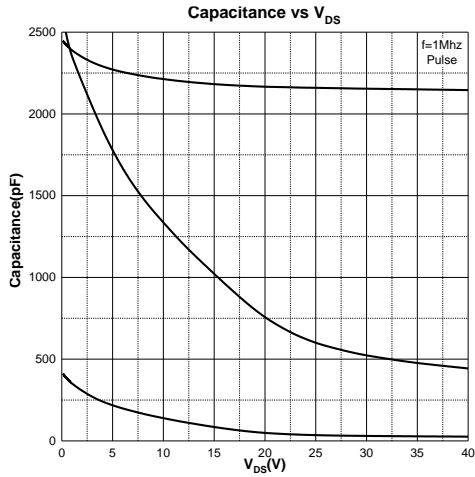
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Off Characteristics						
Drain - Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	40			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 40V, V_{GS} = 0V$			1	μA
Gate - Body Leakage Current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 100	nA
On Characteristics⁴						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.0	1.6	3.0	V
Drain-source On-resistance	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 10A$		2.8	3.5	m Ω
		$V_{GS} = 4.5V, I_D = 10A$		3.8	5.5	
Forward Transconductance	g_{FS}	$V_{DS} = 10V, I_D = 10A$		21		S
Dynamic Characteristics						
Input Capacitance	C_{iss}	$V_{DS} = 20V, V_{GS} = 0V, f = 1MHz$		2166	2599	pF
Output Capacitance	C_{oss}			784		
Reverse Transfer Capacitance	C_{rss}			53		
Gate Resistance	R_g	$V_{DS} = 0V, V_{GS} = 0V, f = 1MHz$		3		Ω
Switching Characteristics						
Total Gate Charge	Q_g	$V_{DS} = 20V, V_{GS} = 10V, I_D = 20A$		31	40	nC
Gate-source Charge	Q_{gs}			6		
Gate-drain Charge	Q_{gd}			3.8		
Turn-on Delay Time	$t_{d(on)}$	$V_{DD} = 20V, V_{GS} = 10V, R_L = 1\Omega$ $R_G = 3\Omega$		7		ns
Turn-on Rise Time	t_r			2.8		
Turn-off Delay Time	$t_{d(off)}$			24		
Turn-off Fall Time	t_f			3.9		
Source - Drain Diode Characteristics						
Diode Forward Voltage ⁴	V_{SD}	$V_{GS} = 0V, I_S = 10A$			1.2	V

Notes :

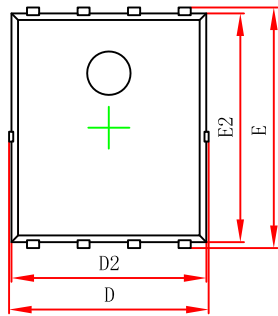
- 1.The maximum current rating is limited by package.And device mounted on a large heatsink
- 2.Pulse Test : Pulse Width $\leq 10\mu s$, duty cycle $\leq 1\%$.
- 3.EAS condition: $V_{DD} = 20V, V_{GS} = 10V, L = 0.5mH, R_G = 25\Omega$ Starting $T_J = 25^\circ\text{C}$.
- 4.Pulse Test : Pulse Width $\leq 300\mu s$, 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

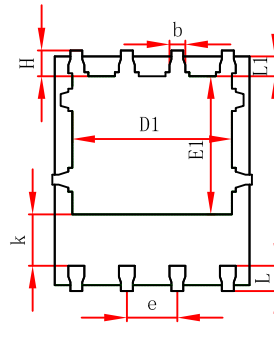




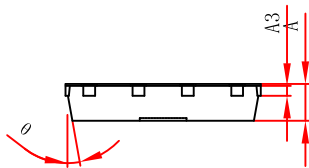
PDFN5×6-8L Package Information



Top View
[顶视图]



Bottom View
[背视图]



Side View
[侧视图]

Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.000	0.035	0.039
A3	0.254REF.		0.010REF.	
D	4.944	5.096	0.195	0.201
E	5.974	6.126	0.235	0.241
D1	3.910	4.110	0.154	0.162
E1	3.375	3.575	0.133	0.141
D2	4.824	4.976	0.190	0.196
E2	5.674	5.826	0.223	0.229
k	1.190	1.390	0.047	0.055
b	0.350	0.450	0.014	0.018
e	1.270TYP.		0.050TYP.	
L	0.559	0.711	0.022	0.028
L1	0.424	0.576	0.017	0.023
H	0.574	0.726	0.023	0.029
θ	10°	12°	10°	12°

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)