

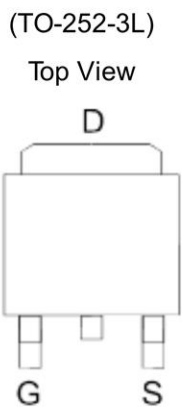
Features

- $R_{DS(ON)} \leq 100m\Omega @ V_{GS}=10V$
- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current

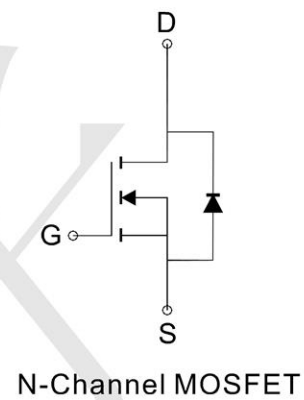
Application

- Power Management in Note book
- DC/DC Converter
- Load Switch
- LCD Display inverter

Package and Pin Configuration



Circuit diagram



Marking:



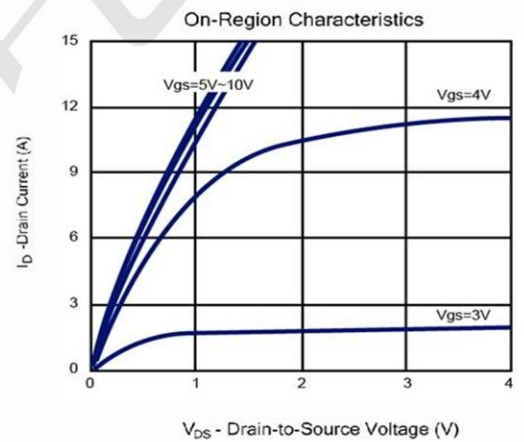
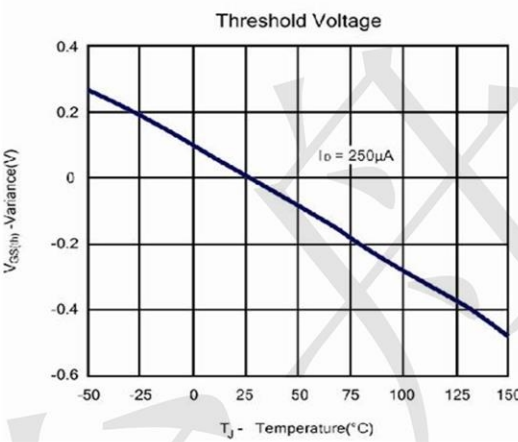
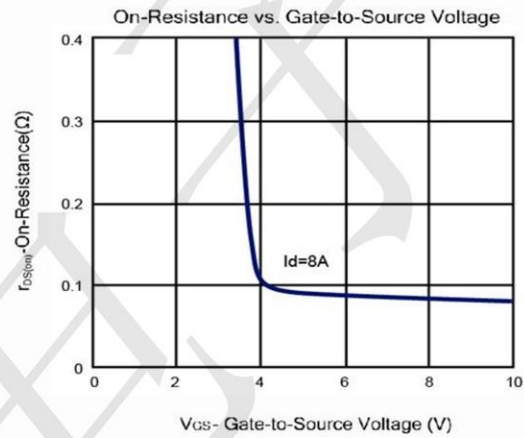
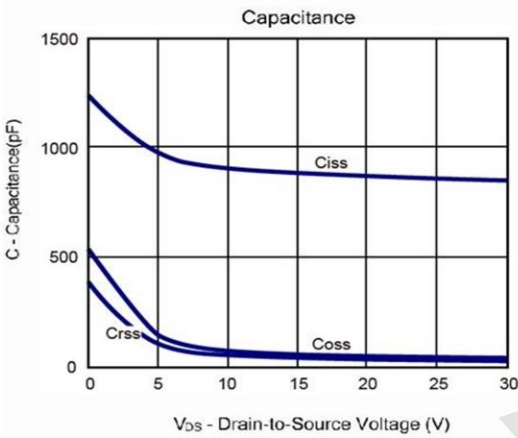
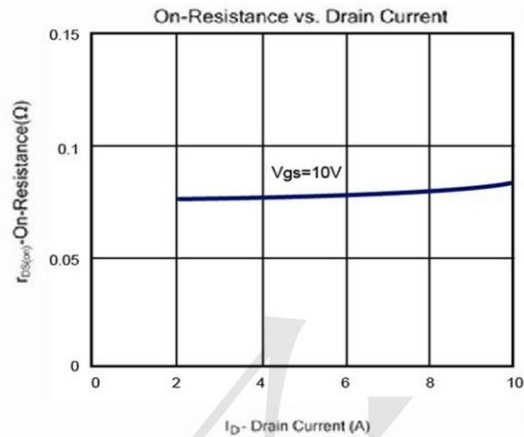
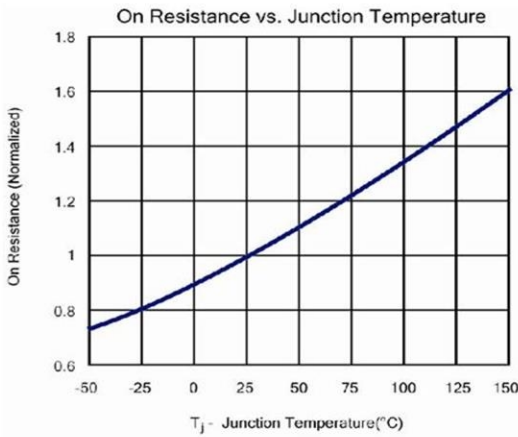
Absolute Maximum Ratings ($T_c=25^\circ C$ unless otherwise specified)

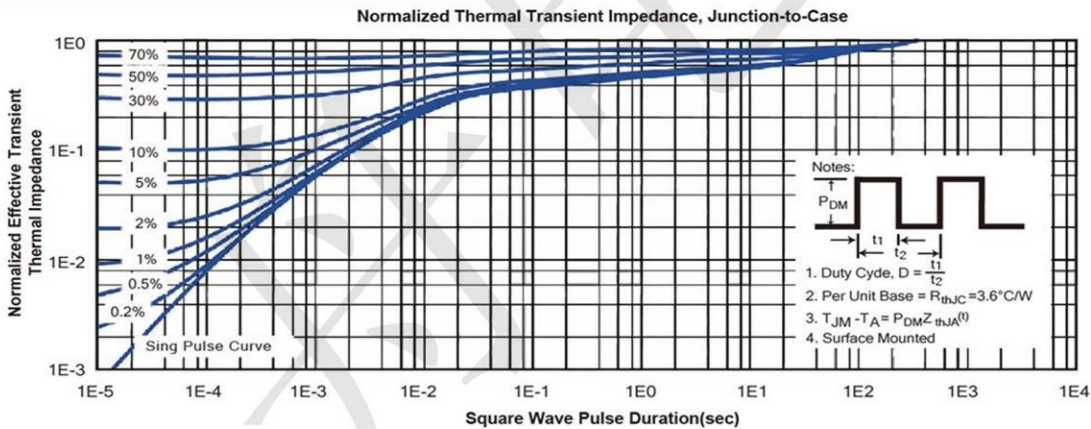
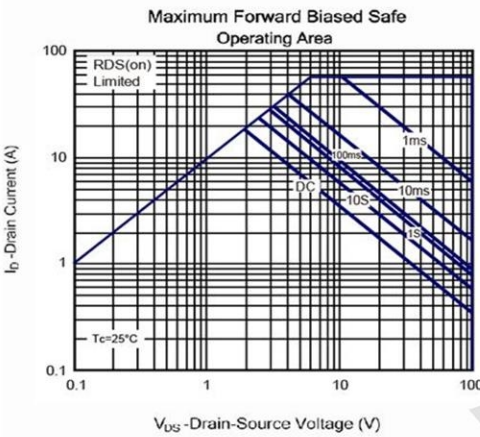
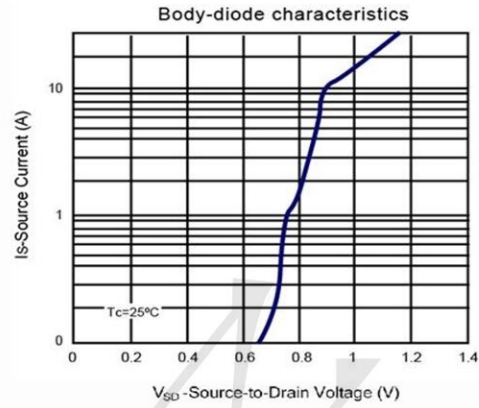
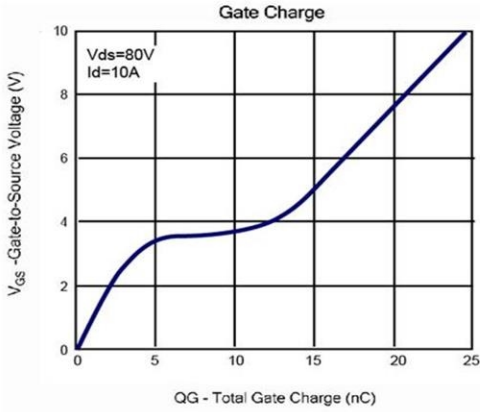
Parameter	Symbol	Maximum Ratings	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	$T_c=25^\circ C$	14.7
		$T_c=70^\circ C$	13.6
Pulsed Drain Current	I_{DM}	59	A
Maximum Power Dissipation	P_D	$T_c=25^\circ C$	34.7
		$T_c=70^\circ C$	22.2
Junction and Storage Temperature Range	T_J, T_{stg}	-55 to 150	$^\circ C$
Thermal Resistance-Junction to Case *	$R_{\theta JC}$	3.6	$^\circ C/W$

Electrical Characteristics ($T_J=25^\circ\text{C}$ unless otherwise specified)

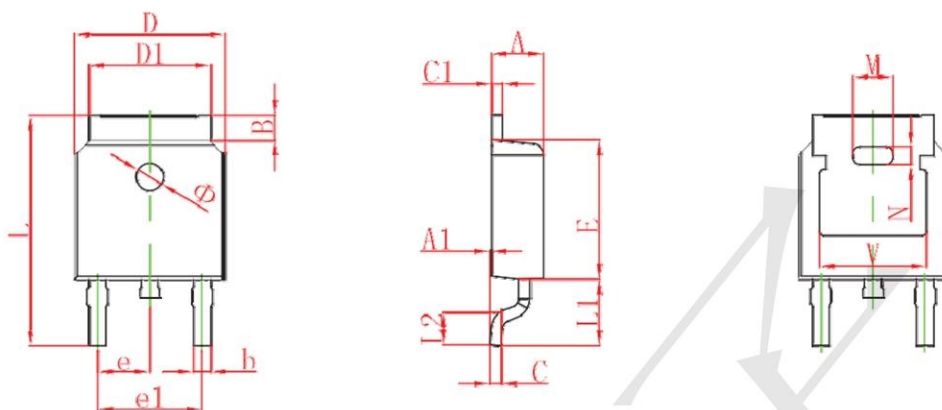
Symbol	Parameter	Limit	Min	Typ	Max	Unit
STATIC						
BV _{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	100			V
V _{GS(th)}	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu A$	1		3	V
I _{GSS}	Gate Leakage Current	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
I _{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=80V, V_{GS}=0V$			1	μA
R _{DS(ON)}	Drain-Source On-Resistance ^a	$V_{GS}=10V, I_D=8A$		80	100	m Ω
V _{SD}	Diode Forward Voltage	$I_S=8A, V_{GS}=0V$		0.9	1.2	V
DYNAMIC						
Q _g	Total Gate Charge	$V_{DS}=80V, V_{GS}=10V, I_D=10A$		24		nC
Q _g	Total Gate Charge	$V_{DS}=80V, V_{GS}=4.5V, I_D=10A$		13		
Q _{gs}	Gate-Source Charge			4.6		
Q _{gd}	Gate-Drain Charge			7.6		
C _{iss}	Input Capacitance	$V_{DS}=15V, V_{GS}=0V, f=1MHz$		882		pF
C _{oss}	Output Capacitance			57		
C _{rss}	Reverse Transfer Capacitance			44		
t _{d(on)}	Turn-On Delay Time	$V_{DS}=50V, R_L=5\Omega,$ $V_{GS}=10V, R_G=1\Omega$ $I_D=1A$		14		ns
t _r	Turn-On Rise Time			33		
t _{d(off)}	Turn-Off Delay Time			39		
t _f	Turn-Off Fall Time			5		

Typical Electrical and Thermal Characteristic Curves





TO252 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.	
⌀	1.100	1.300	0.043	0.051

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