



Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-100V	42mΩ@-10V	-30A
	48mΩ@-4.5V	

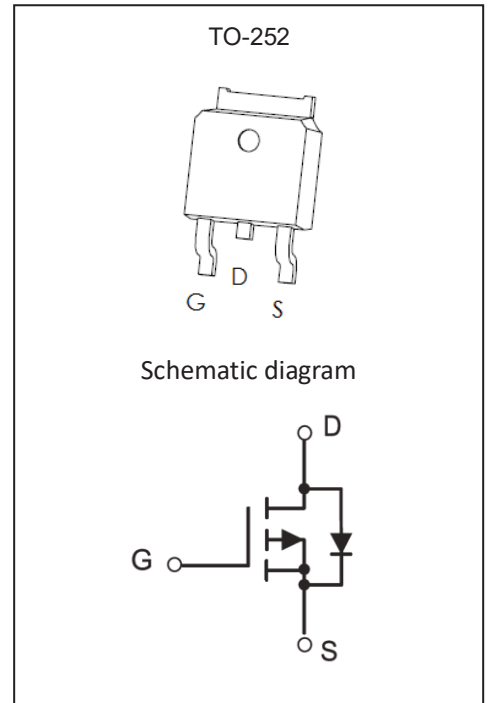
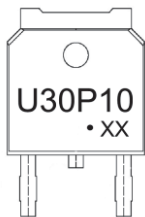
Feature

- Super high dense cell design
- Advanced trench process technology
- Reliable and rugged
- High density cell design for ultra low On-Resistance

Application

- Portable equipment and battery powered systems

MARKING:



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-100	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current ⁽¹⁾	I_D	-30	A
Pulsed Drain Current ⁽²⁾	I_{DM}	-150	A
Single Pulse Avalanche Energy ⁽³⁾	E_{AS}	345	mJ
Avalanche Current	I_{AS}	28	A
Total Power Dissipation ⁽⁴⁾	P_D	120	W
Thermal Resistance from Junction to Case	$R_{\theta JC}$	1.25	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^\circ\text{C}$

MOSFET ELECTRICAL CHARACTERISTICS(T_c=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-100			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -80V, V _{GS} = 0V			-1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±100	nA
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-1.5	-2.0	-2.5	V
Drain-source on-resistance ⁽²⁾	R _{DS(on)}	V _{GS} = -10V, I _D = -15A		42	58	mΩ
		V _{GS} = -4.5V, I _D = -15A		48	65	
Forward tranconductance	g _{FS}	V _{DS} = -10V, I _D = -10A	20			S
Dynamic characteristics						
Input Capacitance	C _{iss}	V _{DS} = -25V, V _{GS} = 0V, f = 1MHz		6616		pF
Output Capacitance	C _{oss}			230		
Reverse Transfer Capacitance	C _{rss}			130		
Switching Characteristics						
Total Gate Charge	Q _g	V _{DS} = -80V, V _{GS} = -10V, I _D = -14A		95		nC
Gate-Source Charge	Q _{gs}			19		
Gate-Drain Charge	Q _{gd}			15		
Turn-on delay time	t _{d(on)}	V _{DD} = -50V, V _{GS} = -10V, I _D = -14A R _G = 3.3Ω		23		ns
Turn-on rise time	t _r			34		
Turn-off delay time	t _{d(off)}			125		
Turn-off fall time	t _f			65		
Diode Characteristics						
Continuous Source Current	I _S	V _G = V _D = 0V, Force Current			-30	A
Diode Forward Voltage	V _{SD}	V _{GS} = 0V, I _S = -10A, T _J = 25°C			1.2	V
Reverse Recovery Time	t _{rr}	T _J = 25°C I _F = -14A, dI/dt = 100A/μs ³		31.2		nS
Reverse Recovery Charge	Q _{rr}				31.97	

Note :

- 1.The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper.
- 2.The data tested by pulsed , pulse width ≤ 300us , duty cycle ≤ 2%
- 3.The E_{AS} data shows Max. rating . The test condition is V_{DD} = -25V, V_{GS} = -10V, L = 0.88mH, I_{AS} = -28A
- 4.The power dissipation is limited by 150°C junction temperature
- 5.The data is theoretically the same as I_D and I_{DM} , in real applications , should be limited by total power dissipation.

Typical Electrical and Thermal Characteristics

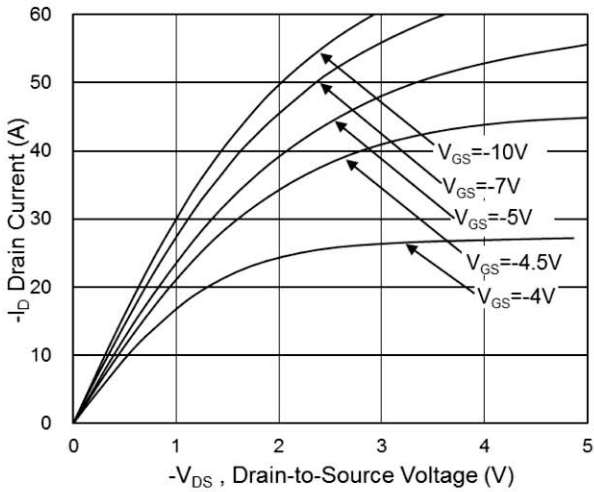


Fig.1 Typical Output Characteristics

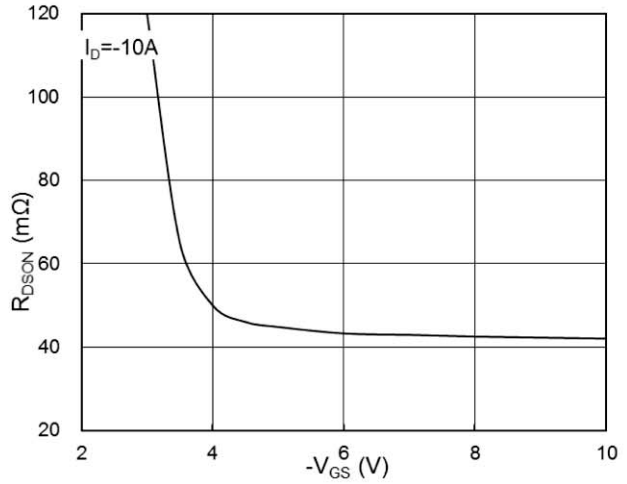


Fig.2 On-Resistance vs. G-S Voltage

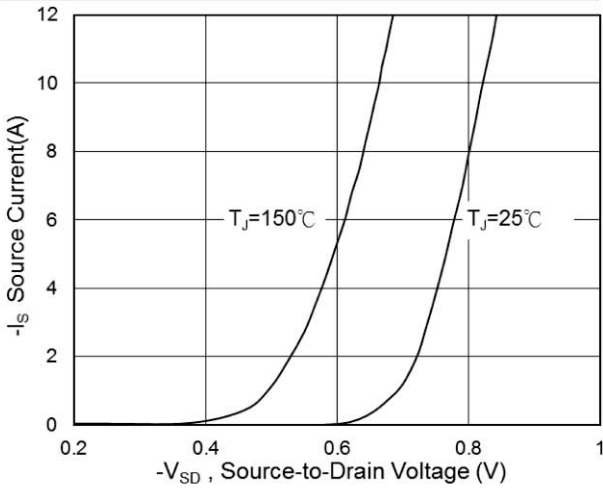


Fig.3 Typical S-D Diode Forward Voltage

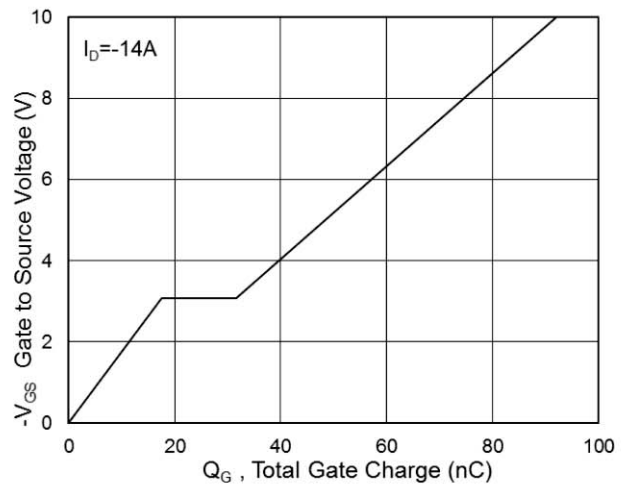


Fig.4 Gate-Charge Characteristics

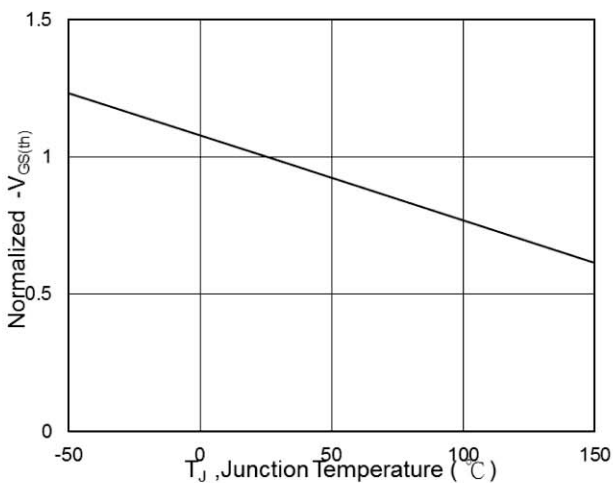


Fig.5 Normalized $V_{GS(th)}$ vs. T_J

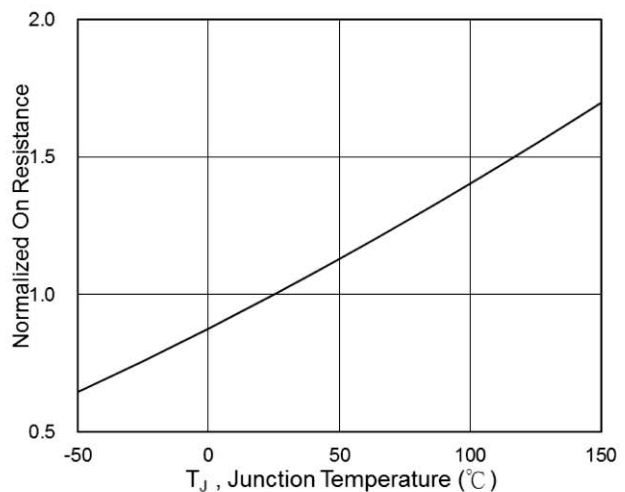


Fig.6 Normalized $R_{DS(on)}$ vs. T_J

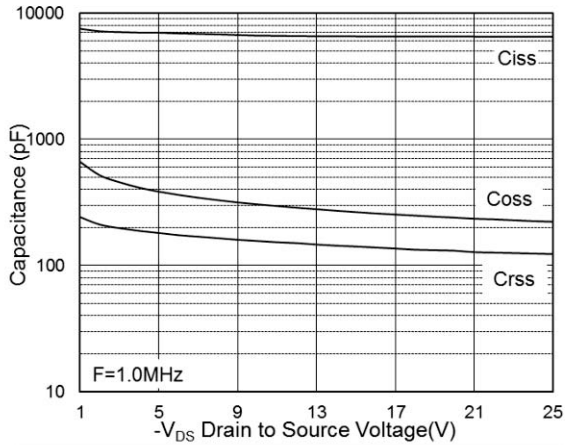


Fig.7 Capacitance

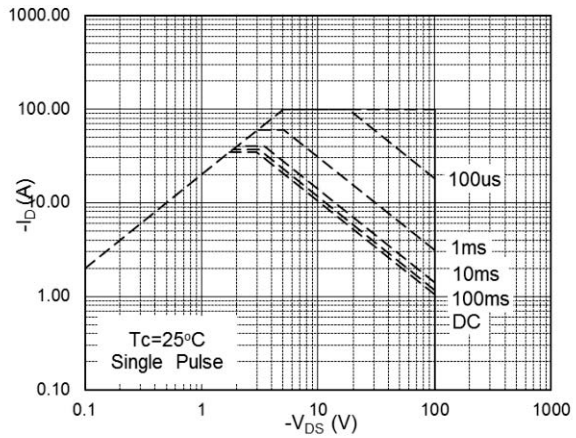


Fig.8 Safe Operating Area

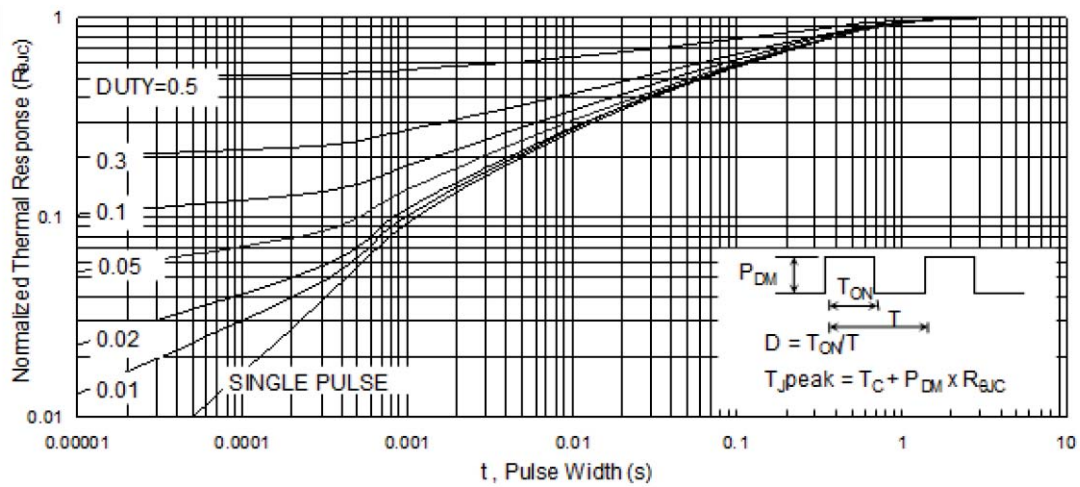
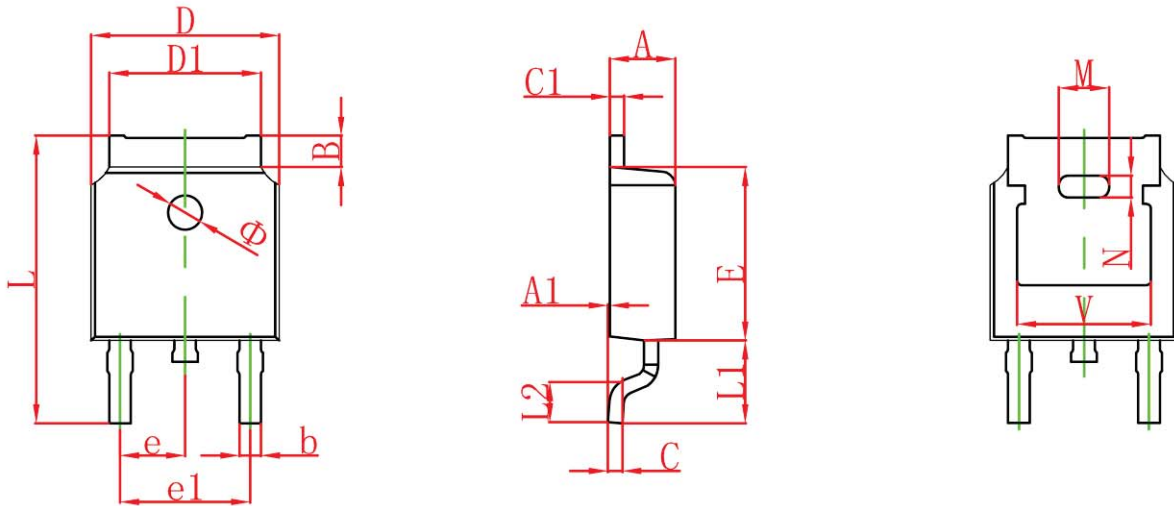


Fig.9 Normalized Maximum Transient Thermal Impedance

TO-252 Package Information

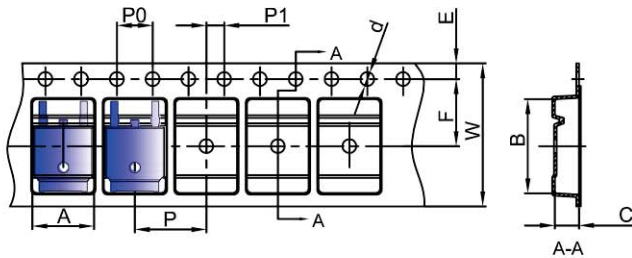


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.380	0.087	0.094
A1	0.000	0.100	0.000	0.004
B	0.800	1.400	0.031	0.055
b	0.710	0.810	0.028	0.032
c	0.460	0.560	0.018	0.022
c1	0.460	0.560	0.018	0.022
D	6.500	6.700	0.256	0.264
D1	5.130	5.460	0.202	0.215
E	6.000	6.200	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

TO-252 Tape and Reel

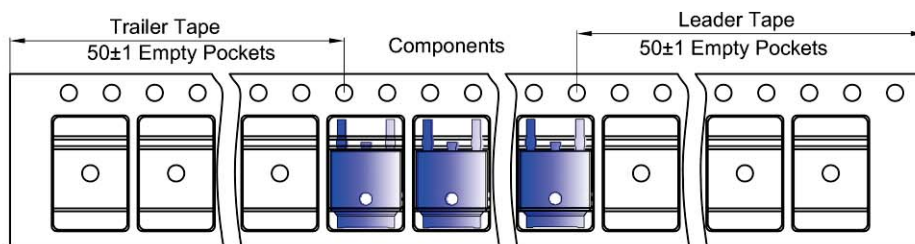
TO-252 Tape and reel

TO-252 Embossed Carrier Tape

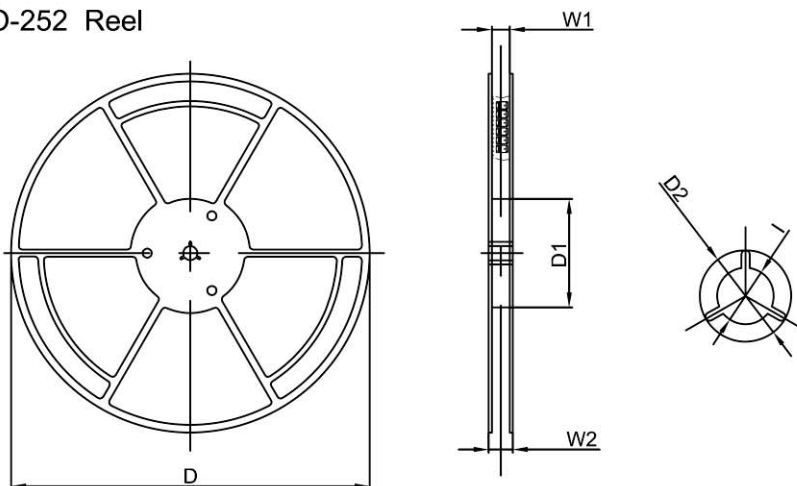


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
TO-252	6.90	10.50	2.70	Ø1.55	1.75	7.50	4.00	8.00	2.00	16.00
(Tolerance)	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+0.3/-0.1

TO-252 Tape Leader and Trailer



TO-252 Reel



Dimensions are in millimeter						
Reel Option	D	D1	D2	W1	W2	l
13" Dia	330.00	100.00	Ø21.00	16.40	21.00	Ø13.00
Tolerance	+/-2	+/-1	+/-1	+/-1	+/-1	+/-1

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
2,500 pcs	13inch	2,500 pcs	340×336×29	25,000 pcs	353×346×365	14.04

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)