



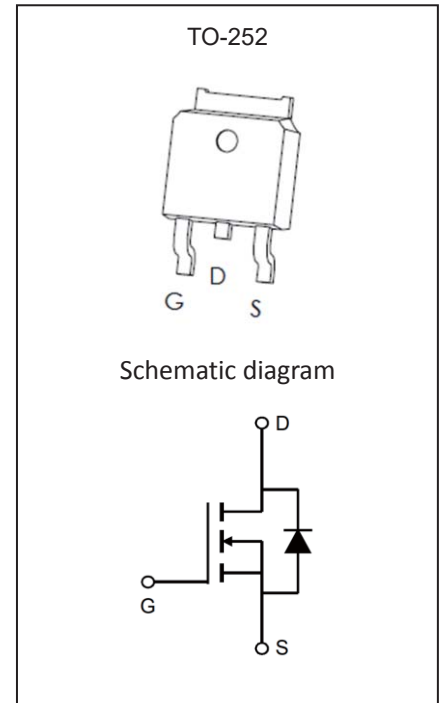
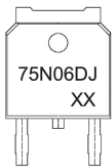
Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
60V	7.2mΩ@10V	75A

Feature

- High density cell design for ultra low Rdson
- Fully characterized avalanche voltage and current
- Good stability and uniformity with high E_{AS}
- Excellent package for good heat dissipation
- Special process technology for high ESD capability
- **Application**
- Power switching application
- Hard switched and high frequency circuits
- Uninterruptible Power Supply

MARKING:



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	75	A
Pulsed Drain Current	I_{DM}	300	A
Single Pulse Avalanche Energy ⁵	E_{AS}	450	mJ
Total Power Dissipation	P_D	41	W
Thermal Resistance from Junction to Case	$R_{\theta JC}$	3	$^{\circ}C/W$
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}C$

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	60			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = 60V, V _{GS} = 0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±100	nA
Gate threshold voltage ³	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	2	3	4	V
Drain-source on-resistance ³	R _{DS(on)}	V _{GS} = 10V, I _D = 30A		7.2	9.5	mΩ
Forward transconductance ³	g _{FS}	V _{DS} = 10V, I _D = 15A	18			S
Dynamic characteristics⁴						
Input Capacitance	C _{iss}	V _{DS} = 25V, V _{GS} = 0V, f = 1MHz		2860		pF
Output Capacitance	C _{oss}			281		
Reverse Transfer Capacitance	C _{rss}			265		
Switching Characteristics⁴						
Total Gate Charge@-4.5V	Q _g	V _{DS} =50V, V _{GS} =10V, I _D =40A		77		nC
Gate-Source Charge	Q _{gs}			15.7		
Gate-Drain Charge	Q _{gd}			35.2		
Turn-on delay time	t _{d(on)}	V _{DD} =30V, V _{GS} =10V, R _L =15Ω, I _D =2A R _G =2.5Ω		18		ns
Turn-on rise time	t _r			29		
Turn-off delay time	t _{d(off)}			55		
Turn-off fall time	t _f			27		
Diode Characteristics						
Continuous Source Current ²	I _S	V _G =V _D =0V, Force Current			75	A
Diode Forward Voltage ³	V _{SD}	V _{GS} =0V, I _S =1A, T _J =25°C			1.2	V
Reverse Recovery Time	t _{rr}	T _J =25°C I _F =75A, di/dt=100A/μs ³		26		nS
Reverse Recovery Charge	Q _{rr}			33		nC

Note :

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t ≤ 10 sec.
3. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.
4. Guaranteed by design, not subject to production
5. EAS condition : T_J=25°C, V_{DD}=30V, V_G=10V, L=0.5mH, R_g=25Ω

Typical Electrical and Thermal Characteristics

Figure1. Output Characteristics

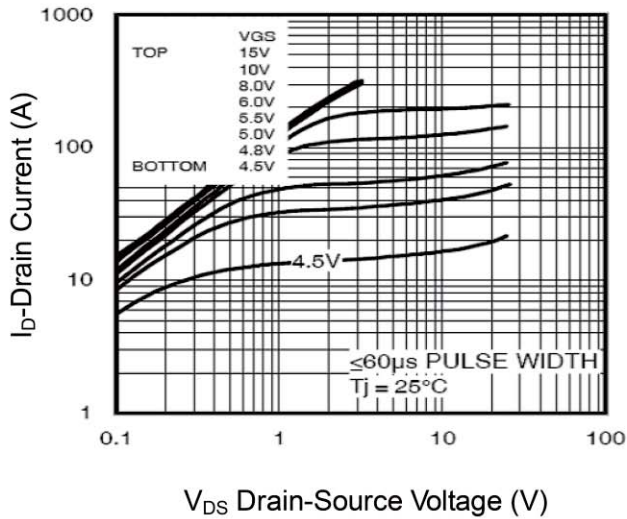


Figure2. Transfer Characteristics

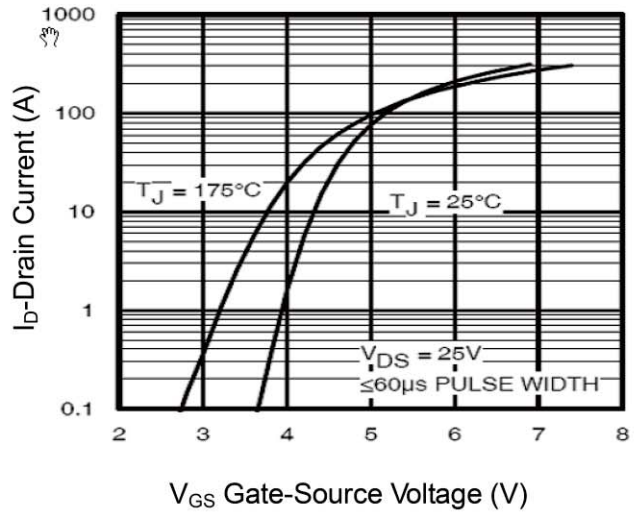


Figure3. BVDSS vs Junction Temperature

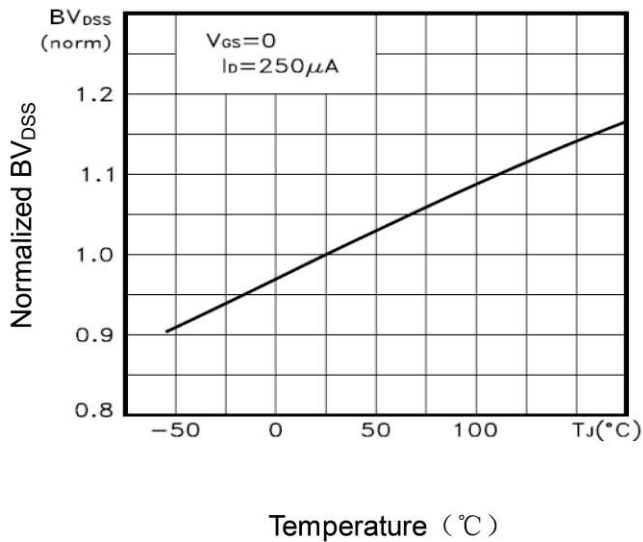


Figure4. ID vs Junction Temperature

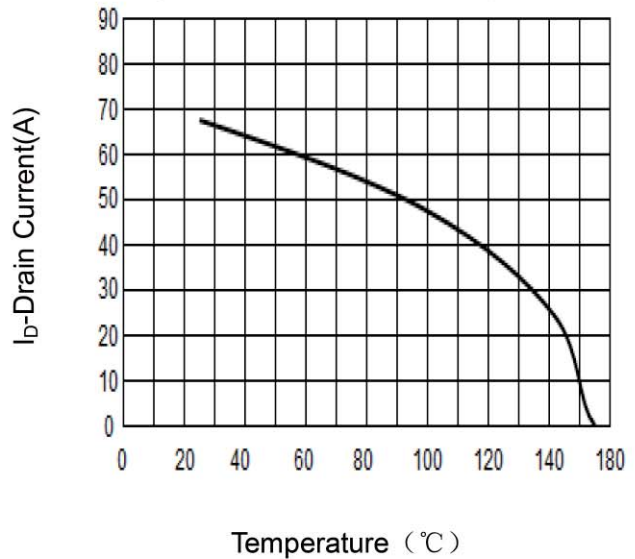


Figure5. VGS(th) vs Junction Temperature

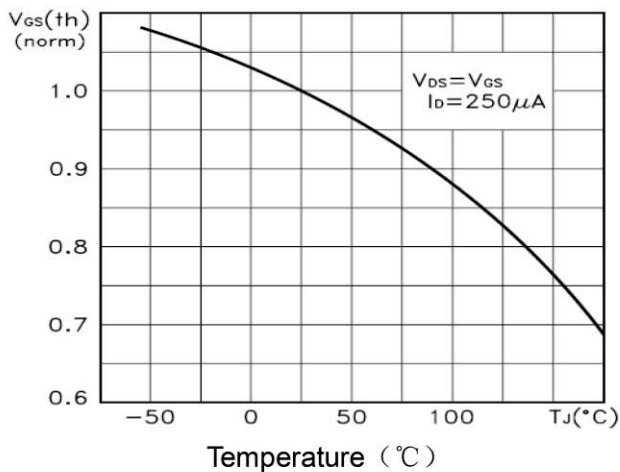


Figure6. Rds(on) Vs Junction Temperature

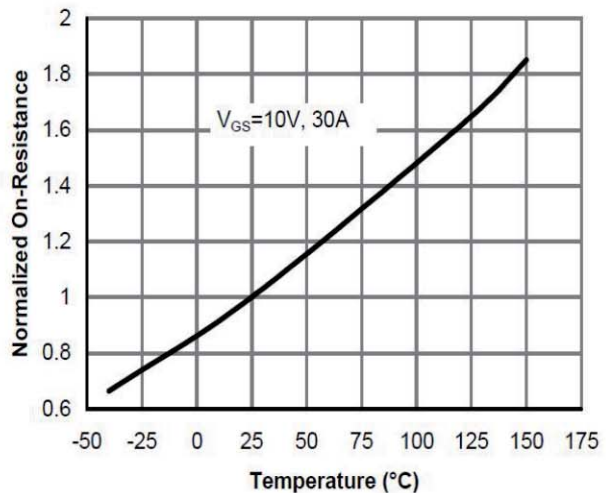


Figure7. Gate Charge

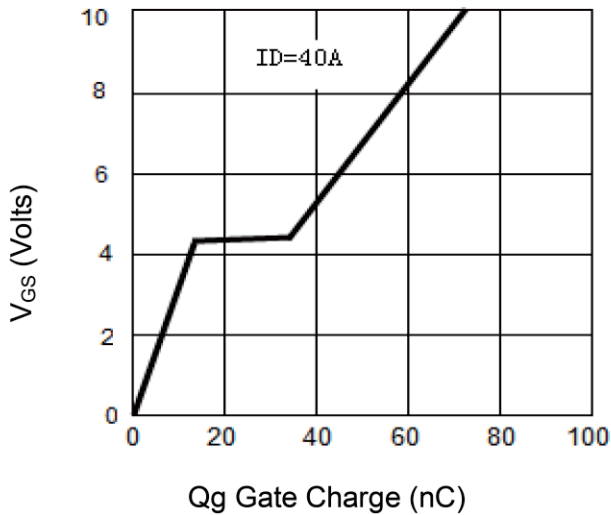


Figure8. Capacitance vs Vds

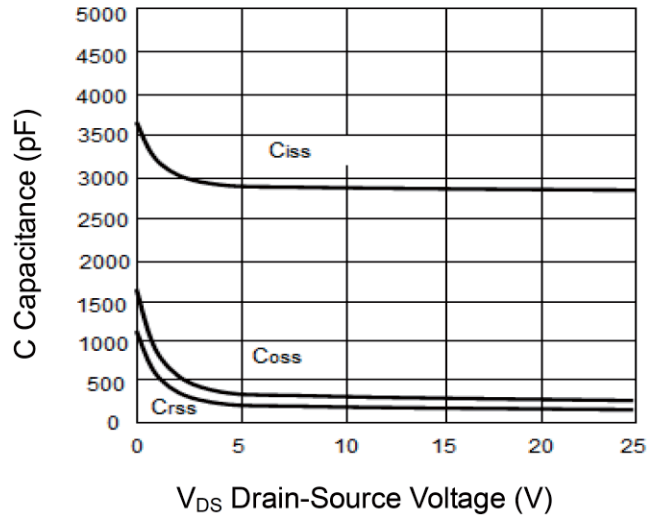


Figure9. Source- Drain Diode Forward

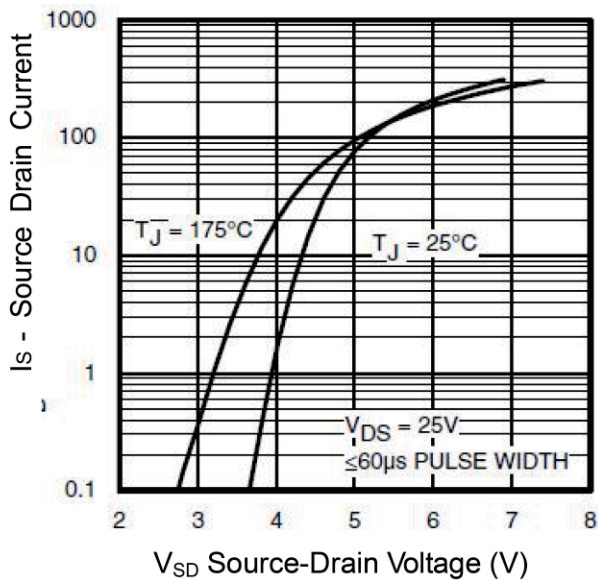


Figure10. Safe Operation Area

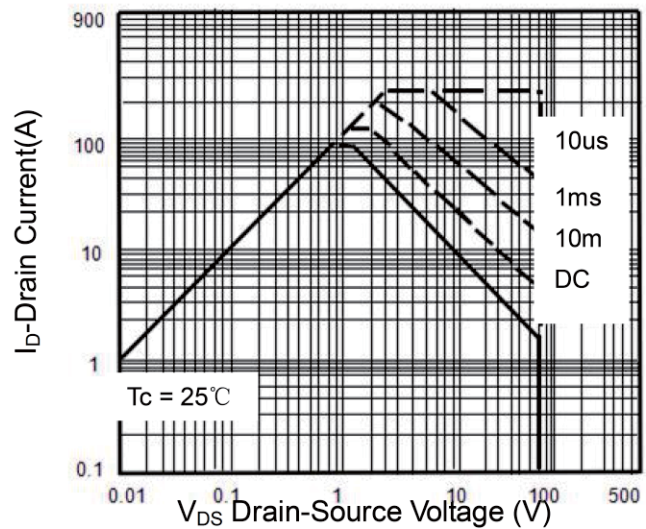
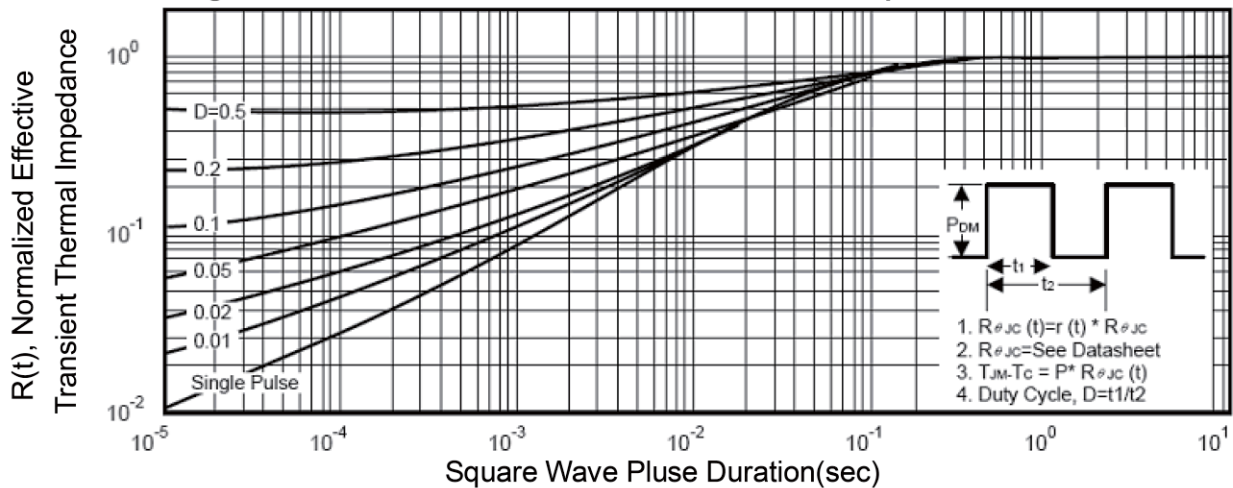
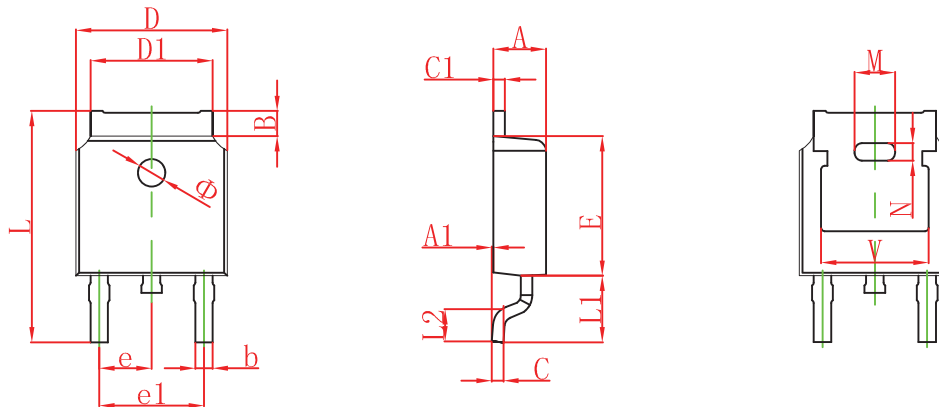


Figure11. Normalized Maximum Transient Thermal Impedance



TO-252 Package Information

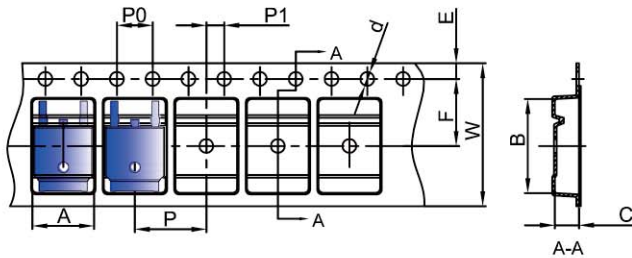


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.380	0.087	0.094
A1	0.000	0.100	0.000	0.004
B	0.800	1.400	0.031	0.055
b	0.710	0.810	0.028	0.032
c	0.460	0.560	0.018	0.022
c1	0.460	0.560	0.018	0.022
D	6.500	6.700	0.256	0.264
D1	5.130	5.460	0.202	0.215
E	6.000	6.200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

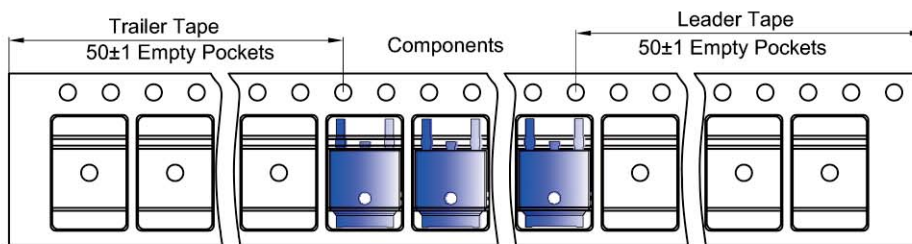
TO-252 Tape and reel

TO-252 Embossed Carrier Tape

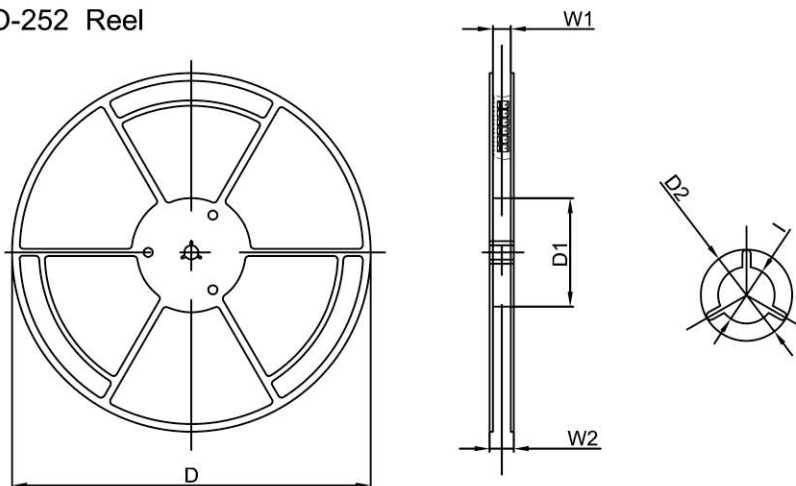


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
TO-252	6.90	10.50	2.70	Ø1.55	1.75	7.50	4.00	8.00	2.00	16.00
(Tolerance)	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+0.3/-0.1

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\(格瑞宝\)](#)