



Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-40V	63m Ω @-10V	-10A
	98m Ω @-4.5V	

Feature

- TrenchFET Power MOSFET
- Exceptional on-resistance and maximum DC current capability

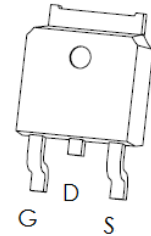
Application

- DC/DC Converter
- Load Switch for Portable Devices
- Battery Switch

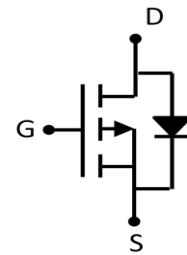
MARKING:



TO-252-2L



Schematic diagram



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-40	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	-10	A
Pulsed Drain Current	I_{DM}	-40	A
Power Dissipation	P_D	1.25	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	100	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^\circ\text{C}$

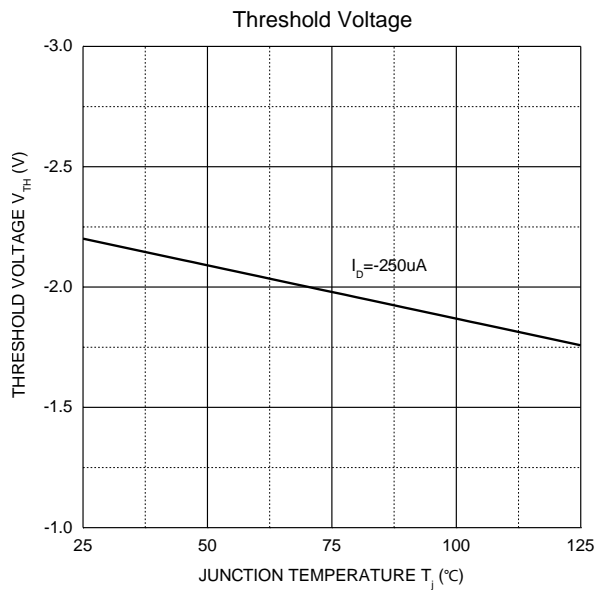
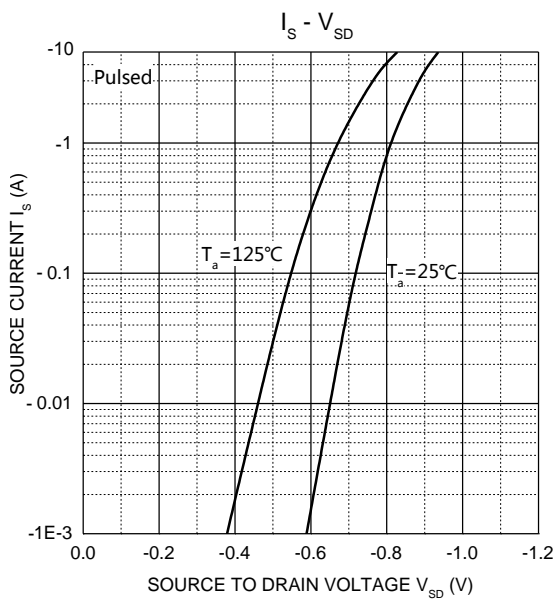
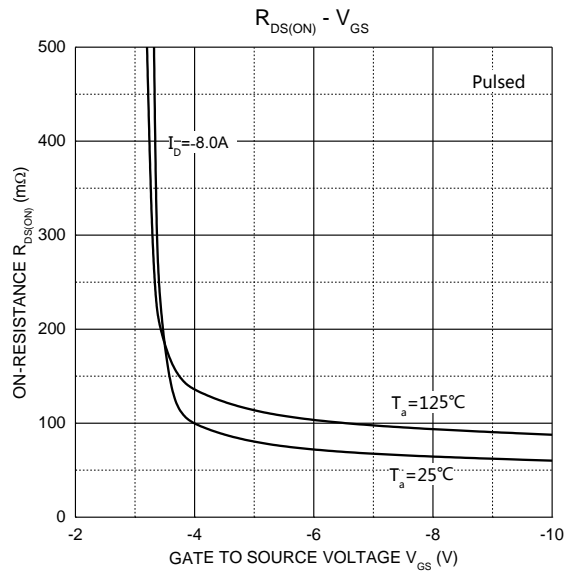
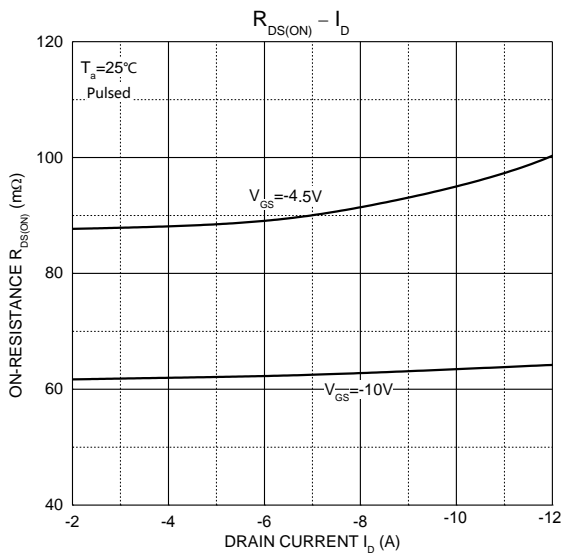
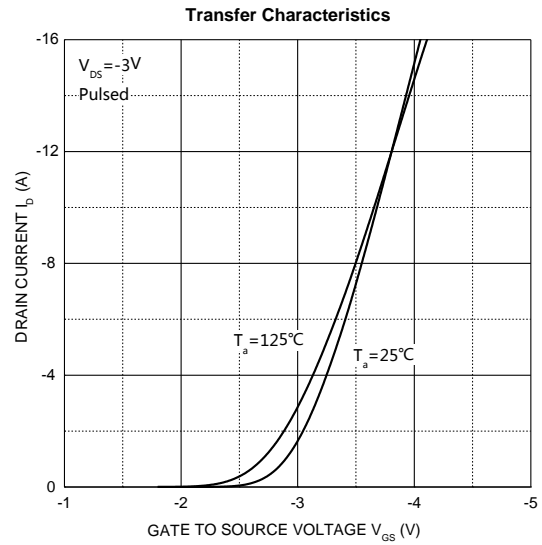
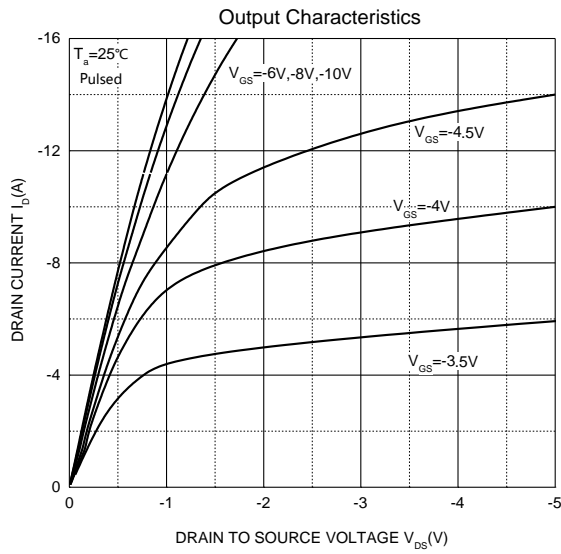
MOSFET ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-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
Gate threshold voltage ⁽¹⁾	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1.0	-2.1	-3.0	V
Drain-source on-resistance ⁽¹⁾	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -10A$		63	85	m Ω
		$V_{GS} = -4.5V, I_D = -8A$		98	126	
Forward transconductance	g_{FS}	$V_{DS} = -5V, I_D = -10A$	7			S
Dynamic characteristics⁽²⁾						
Input Capacitance	C_{iss}	$V_{DS} = -20V, V_{GS} = 0V, f = 1MHz$		445		pF
Output Capacitance	C_{oss}			19		
Reverse Transfer Capacitance	C_{rss}			15		
Total Gate Charge	Q_g	$V_{DS} = -20V, I_D = -10A, V_{GS} = -10V$		14		nC
Gate-Source Charge	Q_{gs}			2.9		
Gate-Drain Charge	Q_{gd}			3.8		
Switching characteristics⁽²⁾						
Turn-on delay time	$t_{d(on)}$	$V_{DD} = -20V, R_L = 2\Omega$ $V_{GS} = -10V, R_{GEN} = 3\Omega$		8		ns
Turn-on rise time	t_r			9		
Turn-off delay time	$t_{d(off)}$			28		
Turn-off fall time	t_f			10		
Source-Drain Diode characteristics						
Diode Forward voltage ⁽¹⁾	V_{DS}	$V_{GS} = 0V, I_S = -10A$		-0.87	-1.2	V

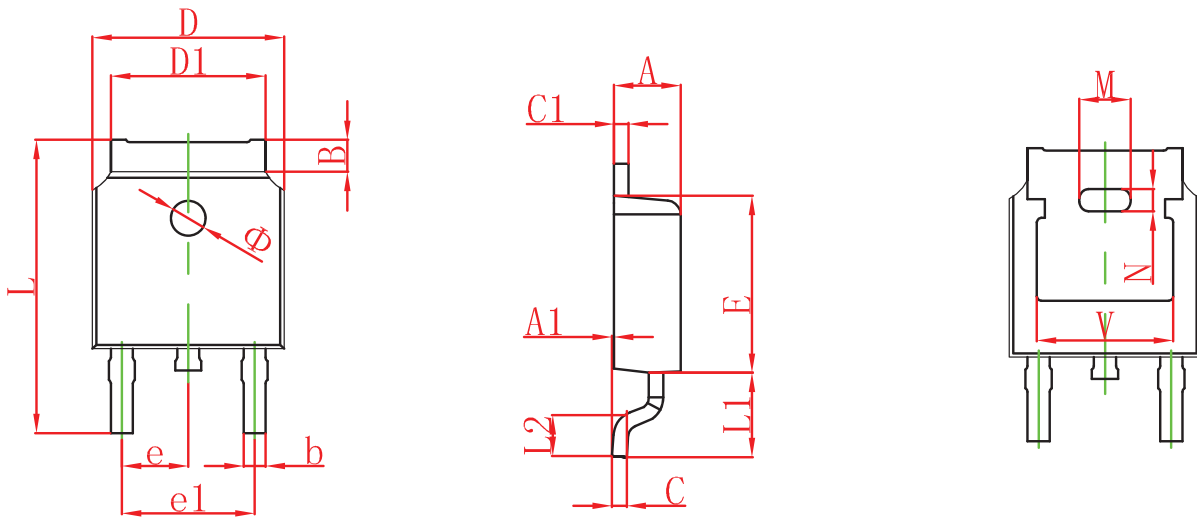
Notes:

1. Pulse test; pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
2. Guaranteed by design, not subject to production testing.

Typical Electrical and Thermal Characteristics



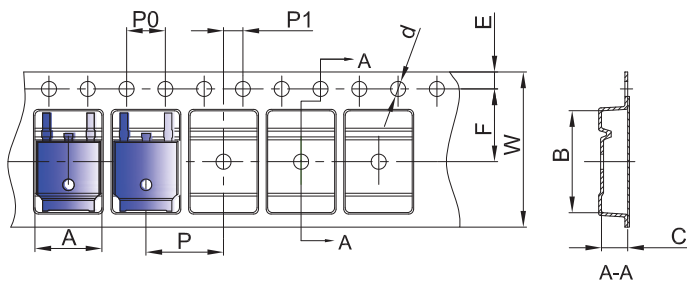
TO-252-2L Package Information



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-252-2L Tape and Reel

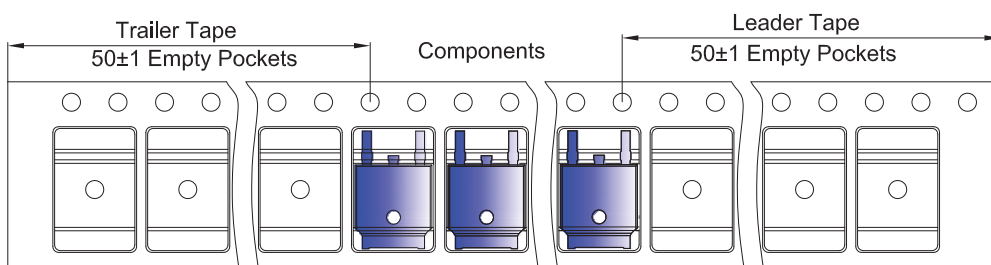
TO-252 Embossed Carrier Tape



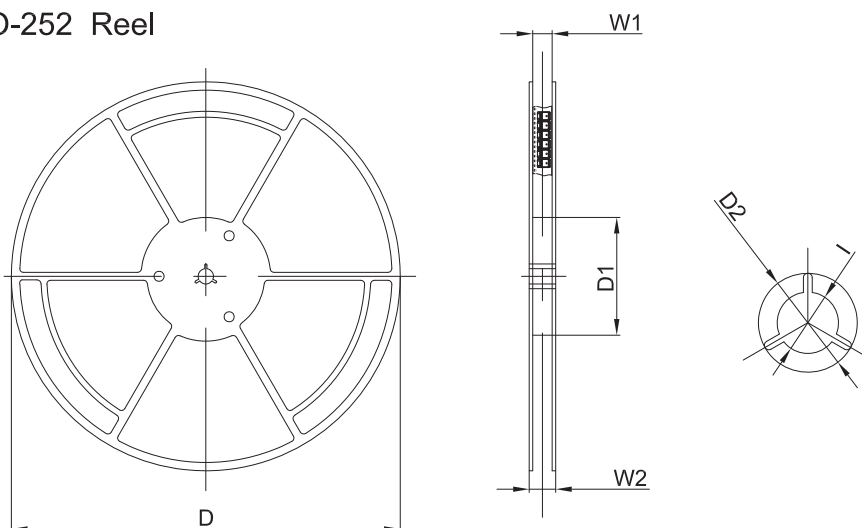
Dimensions are in millimeter

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

TO-252 Tape Leader and Trailer



TO-252 Reel



Dimensions are in millimeter

Reel Option	D	D1	D2	W1	W2	I
13" Dia	330.00	100.00	Ø21.00	16.40	21.00	Ø13.00

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	

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)