

Rev.A Apr.-2024

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TO-252 .> // x N ?ú 3 MOS « | • 'ož
 N-CHANNEL MOSFET in a TO-252 Plastic Package.

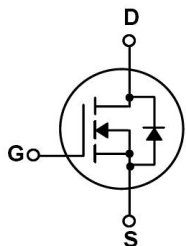
□ a

$V_{DS}=500V$ $I_D=3A$
 $R_{DS(ON)}@10V$ 0.3.5 (Typ. 2.8)
 $\frac{1}{2}$, • $\frac{1}{4}$ ož Fast Switching.
 —)í D }ož HF Product.

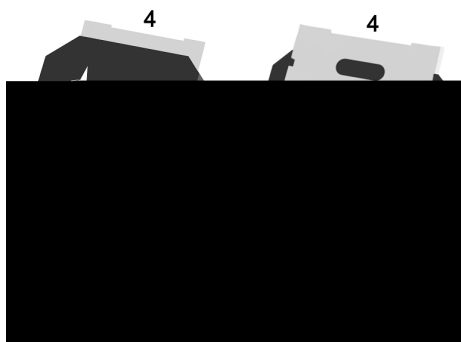
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 These devices are well suited for power switch circuit of adaptor and charger, intergrate fast recovery diode.

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PIN1 y G

PIN 2 y D

PIN 3 y S

PIN 4 y D

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See Marking Instructions.

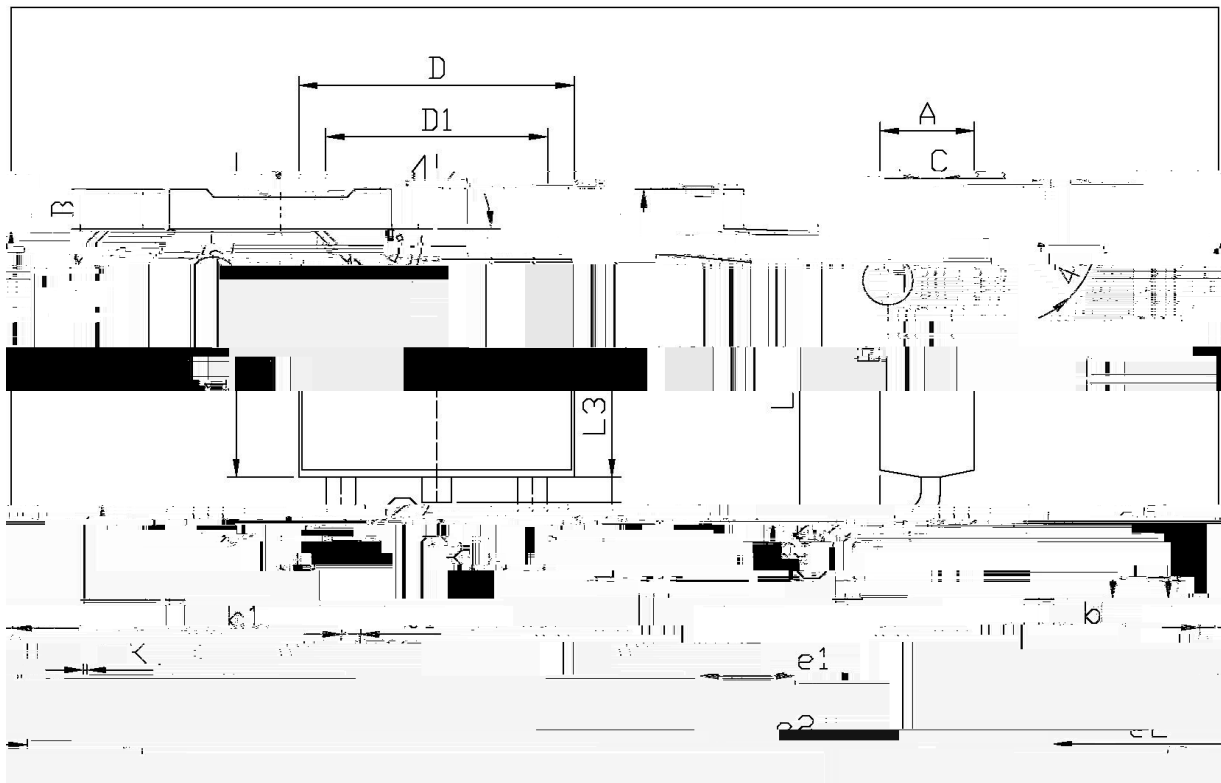
@ f Parameter	... Z Symbol	f > Rating	% y Unit
Drain-Source Voltage	V_{DS}	500	V
Drain Current	$I_D(T_c=25^\circ\text{C})$	3	A
Drain Current - Pulsed	I_{DM}	6	A
Gate-Source Voltage	V_{GS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	90	mJ
Avalanche Current	I_{AS}	4.5	A
Power Dissipation	$P_D(T_c=25^\circ\text{C})$	45	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	
Junction to Ambient	$R_{\theta JA}$	100	/W
Junction to Case	$R_{\theta JC}$	2.78	/W

@ f Parameter	... Z Symbol	y i Ú ^ Test Conditions	Â 4 > Min	Á ° > Typ	Â Ý > Max	% y Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0V$ $I_D=250\text{ }\mu\text{A}$	500			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=500V$ $V_{GS}=0V$			1	A
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\text{ }\mu\text{A}$	2.0		4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=1.5A$		2.8	3.5	
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=3.0A$			1.4	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		220		pF
Output Capacitance	C_{oss}			130		
Reverse Transfer Capacitance	C_{rss}			5		
Total Gate Charge	Q_G	$V_{DS}=400V$ $I_D=3.0A$ $V_{GS}=10V$		12.5		nC
Gate-Source Charge	Q_{GS}			3.2		
Gate-Drain Charge	Q_{GD}			4.2		

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@ f Parameter	... Z Symbol	y i Ú ^ Test Conditions	Â 4 > Min	Á ° > Typ	Â Ý > Max	% y Unit
Turn-On Delay Time	t _{d(on)}	V _{DD} =100V I _D =3.0A V _{GS} =10V R _G =25		5.2		ns
Turn-On Rise Time	t _r			20.3		
Turn-Off Delay Time	t _{d(off)}			45		
Turn-Off Fall Time	t _f			28		
Maximum Continuous Drain-Source Diode Forward Current	I _S				3	A
Maximum Pulsed Drain-Source Diode Forward Current	I _{SM}				6	A
Reverse Recovery Time	t _{rr}	V _{GS} =0V I _S =3.0A dI _F /dt=100 A/ s		64		ns
Reverse Recovery Charge	Q _{rr}			0.8		µC

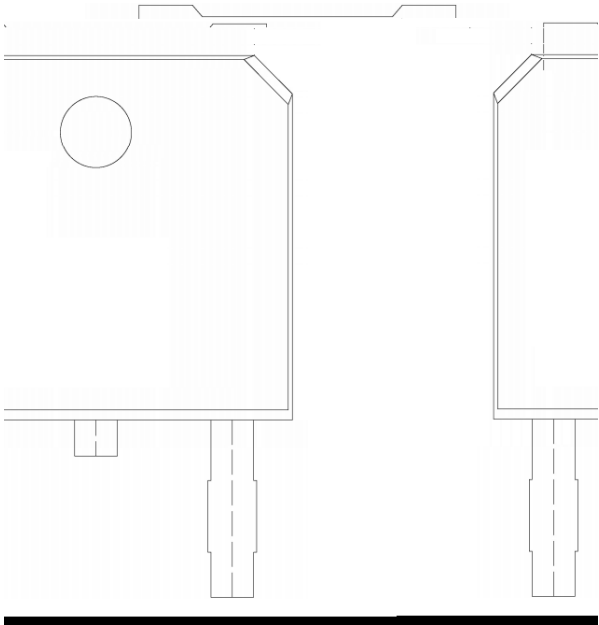
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单位: mm

[illegible]

TO-252

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BR y , [W A
4 ' , y ° Z W A
y ŷ D Z W A k š ŷ D Z J
Note:
BR:

šWD t...•Ž¢ x/ :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6

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- 1o• Ä ½ “† 150 ½180 - k ž • 60 ½90sec;
- 2o• Q > “† 245 r5 - k ž • 4 Ò 5 r0.5sec;
- 3o•D N ò i Ò 0 ,† 2 ½10 - /sec.

Note:

- 1.Preheating:150~180 - , Time:60~90sec.
- 2.Peak Temp.:245 r5 - , Duration:5 r0.5sec.
3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »]

“† y 260 r5 - ž • y 10 r1 sec.

Temp.:260±5

Time:10±1 sec

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2 & x / REEL

Package Type 7>û ~ E	Units ;>û !H	Dimension ;>û p . (unit Åmm³)
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