5 é / Descriptions

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

¤ ª / Features

z õ > z F Ø • ¼ , † ½ k —)í D }ož
Low gate charge, low crss, fast switching, HF Product.

Ð ÷ / Applications

9 ä ä *) *) ô E y ä • ¼ož
These devices are well suited for high efficiency switching DC/DC converters and switch mode power supplies.

Ã W] Ô · / Equivalent Circuit

• Û - æ / Pinning

PIN1 y G PIN 2 y D PIN 3 y S PIN 4 y D

, M V / Marking

• - ~ ª ¢ož See Marking Instructions.

@ ƒ Parameter	… Z Symbol	ƒ › Rating	% y Unit
Drain-Source Voltage	V_{DSS}	500	V
Drain Current	I_D(Tc=25)	5	A
Drain Current - Pulsed	I_{DM}	16	A
Gate-Source Voltage	V_{GSS}	±30	V
Avalanche Current	I_{AR}	4	A
Single Pulsed Avalanche Energy	E_{AS}	300	mJ
Repetitive Avalanche Energy	E_{AR}	4.8	mJ
Power Dissipation (T_C=25)	P_D	48	W
Operating and Storage Temperature Range	T_J,T_{STG}	-55to150	
Thermal resistance,Junction to Ambient	R ©JA	100	/ W
Thermal resistance,Junction to Case	R ©JC	2.6	/ W

@ ƒ Parameter	… Z Symbol	y ¡ Ú ^ Test Conditions	Â 4 › Min	Á º › Typ	Â Ý › Max	% y Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250 A	500			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=500V V_{GS}=0V			1	A
		V_{DS}=400V T_C=125			10	A
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±30V V_{DS}=0V			±0.1	A
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250 A	2		4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=2.5A		1.5	1.6	
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=5A			1.4	V
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1MHz		575		pF
Output Capacitance	C_{oss}			160		pF

Reverse Transfer Capacitance 62(Ca17972 0 0 7.2 245.58 199.94r3 Tm .0023 Tc 0 Tw (iss)Tj e).4958 0 0 10.5 556.

Ô ? d • Ž ¢ / Electrical Characteristic Curve

Ø ¤ =) ¢ / Package Dimensions

, M y ƒ / Marking Instructions

BR
5N50
****

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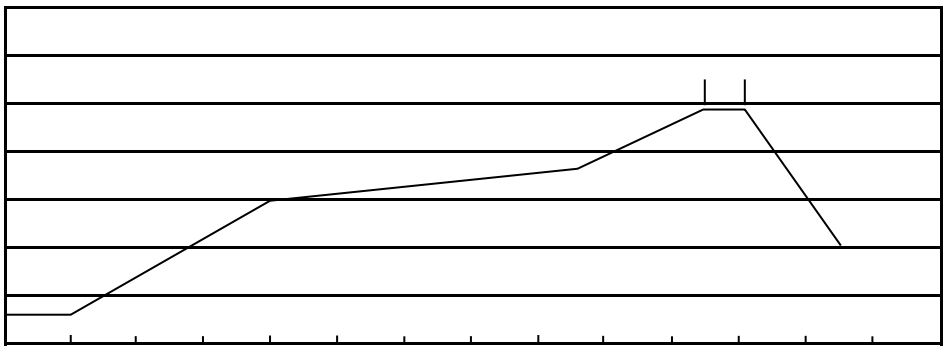
(8 y ¸ [W A
4 y º Z W A
y ÿ D Z W A k š ÿ D Z J

Note:

BR:	Company Code
5N50:	Product Type
****:	Lot No. Code, code change with Lot No

š WD t … • Ž ¢ (x /) / : K S V K X G Z [X K 6 X U L O R K L U X / 8 8 K L R U] 9 U R J K X O T M 6



ª ¢ y

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 ¯ »] / Resistance to Soldering Heat Test Conditions

“ † y 260 r5 - ž • y 10 r1 sec. Temp.:260±5 Time:10±1 sec

G P á / Packaging SPEC.

2 & x / REEL

Package Type 7>û ˜ E	Units ;>û ¦H					Dimension ;>û p . (unit Æmm³)		
	Units/Reel / --	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box×	Outer Box1ç
TO-252	2,500	2	5,000	6	30,000	13 s ×16	360×360×50	380×335×366

ì ’ x / TUBE

Package Type 7>û ˜ E	Units ;>û ¦H					Dimension ;>û p . (unit Æmm³)		
	Units/Tube / •1×	Tubes/Inner Box •1× /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Tube •1×	Inner Box×	Outer Box1ç
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

„ Ð y ƒ / Notices