

5 é / Descriptions

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

□^a / Features

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

Đ ÷ / 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

• Ô - 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.

Absolute Maximum Ratings(Ta=25 ;)

@ f Parameter	... Z Symbol	f > 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 (Tc=25)	P _D	48	W
Operating and Storage Temperature Range	T _J ,T _{STG}	-55to150	
Thermal resistance,Junction to Ambient	R _{θJA}	100	/ W
Thermal resistance,Junction to Case	R _{θJC}	2.6	/ W

Electrical Characteristics(Ta=25 ;)

@ f Parameter	... Z Symbol	y i Ú ^ Test Conditions	Â 4 > Min	Á ° > 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	C _{rss}			2.2		pF
Turn-On Delay Time	t _{d(on)}	V _{DD} =250V I _D =5A R _G =25		12	35	ns
Turn-On Rise Time	t _r			46	100	ns
Turn-Off Delay Time	t _{d(off)}			50	110	ns
Turn-Off Fall Time	t _f			48	105	ns

Ô ? d • Ž ¢ / Electrical Characteristic Curve

Ø □ =) ¢ / Package Dimensions

Marking Instructions

BR
5N50

BRD5N50
(8 y) [W A
4 y ° Z W A
y Ÿ D Z W A k Š Ÿ D Z J

Note:

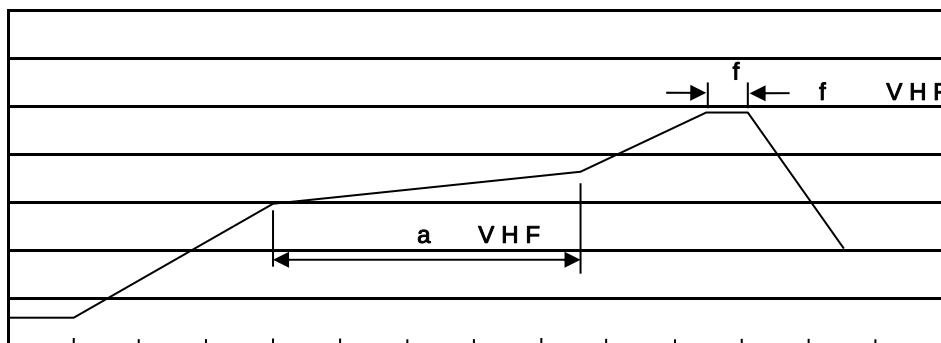
BR: Company Code

5N50: Product Type

****: Lot No. Code, code change with Lot No

šWD t...•Žč (x/) / :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6

7HPSHUDWXUH



7LPH VHF

a č y

10• Ä ½ “† 150 ½180 - k ž • 60 ½90sec;

20• Q > “† 245 r5 - k ž • 4 Ò 5 r0.5sec;

30•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 /Că 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 /mm³)		
	Units/Reel /-	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box	Outer Boxç
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 /mm³)		
	Units/Tube /•1×	Tubes/Inner Box •1× /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Tube•1×	Inner Box	Outer Boxç
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

„Đ y f / Notices