

/ Descriptions

TO-252 N MOS

N-CHANNEL MOSFET in a TO-252 Plastic Package.

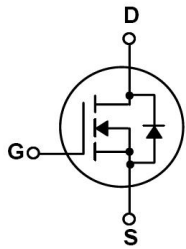
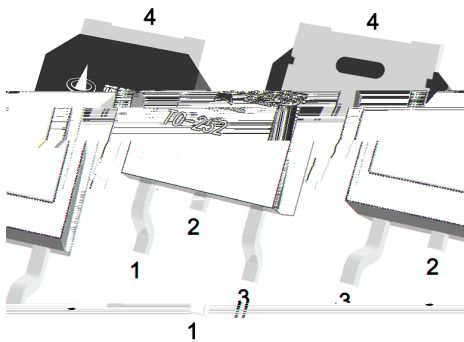
/ Features $V_{DS}=500V$ $I_D=5A$ $R_{DS(ON)}@10V \leq 1.7\Omega$ (Typ. 1.3Ω)

Fast Switching.

HF Product.

/ Applications

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

/ Equivalent Circuit**/ Pinning**

PIN1 G

PIN 2 D

PIN 3 S

PIN 4 D

/ Marking

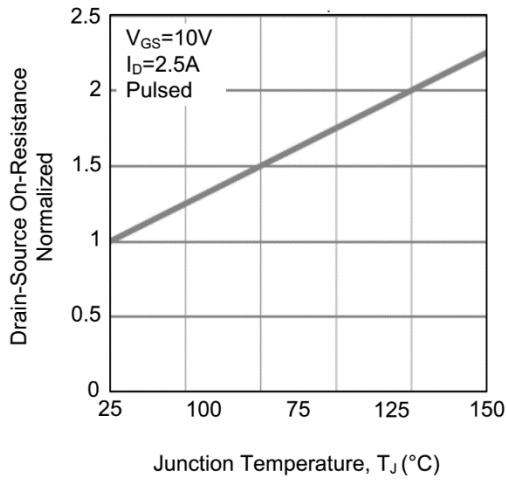
See Marking Instructions.



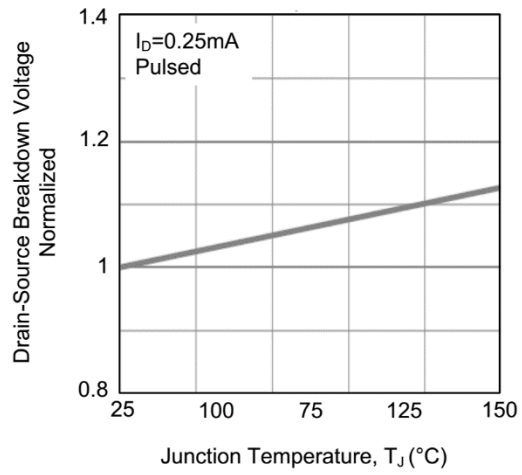
电性能参数 / Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=100V$ $I_D=5.0A$ $V_{GS}=10V$ $R_G=25\Omega$		7.5		ns
Turn-On Rise Time	t_r			18		
Turn-Off Delay Time	$t_{d(off)}$			38.6		
Turn-Off Fall Time	t_f			23.4		
Maximum Continuous Drain-Source Diode Forward Current	I_S				5	A
Maximum Pulsed Drain-Source Diode Forward Current	I_{SM}				10	A
Reverse Recovery Time	t_{rr}	$V_{GS}=0V$ $I_S=5.0A$ $dI_F/dt=100 A/\mu s$		95		ns
Reverse Recovery Charge	Q_{rr}			1.75		μC

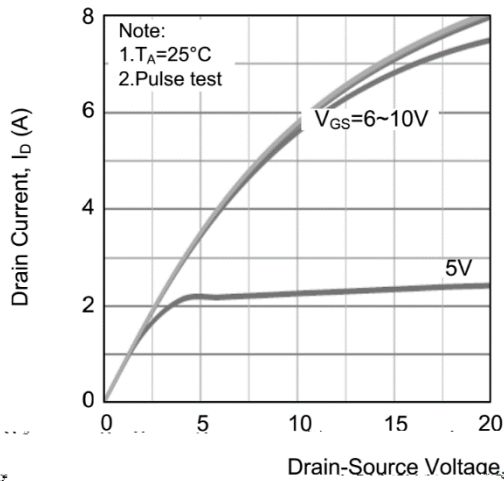
/ Electrical Characteristic Curve



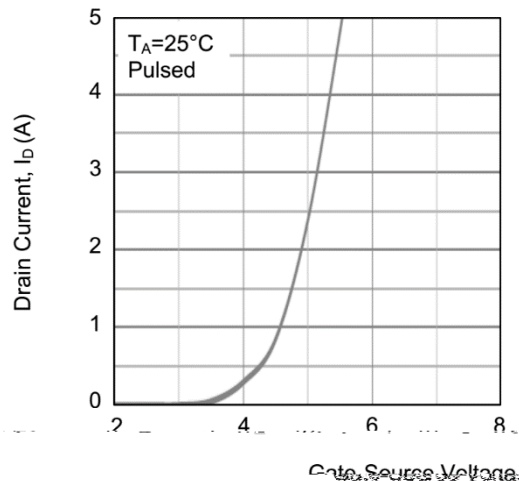
1. Drain-Source On-Resistance vs. Junction Temperature



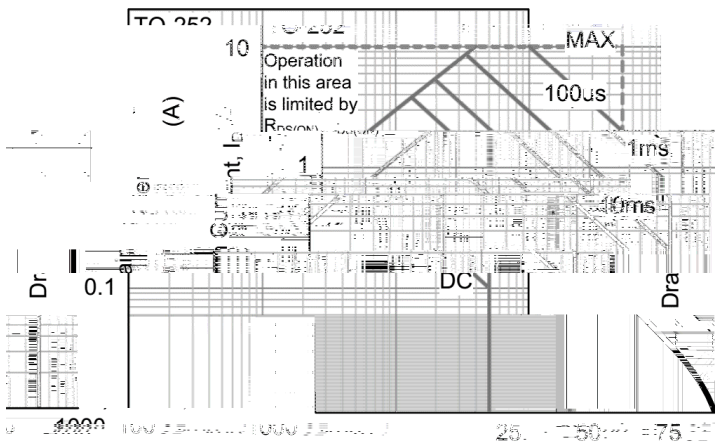
2. Breakdown Voltage vs. Junction Temperature



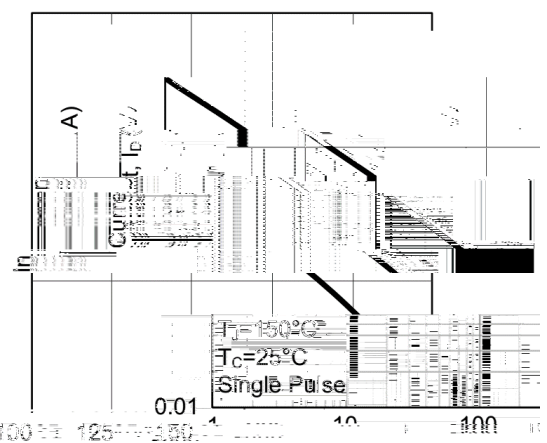
3. Drain Current vs. Drain-Source Voltage



4. Drain Current vs. Gate-Source Voltage



5. Safe Operating Area

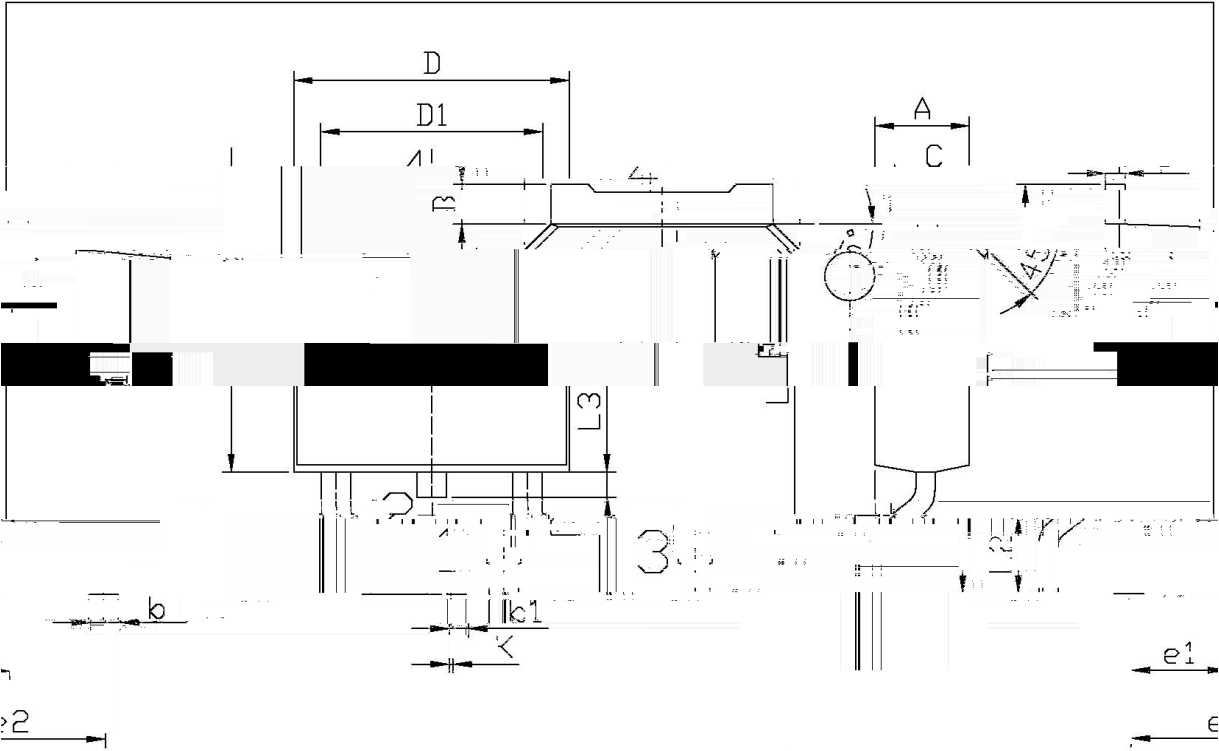


6. Drain Current vs. Junction Temperature

5. Safe Operating Area

Temperature

/ Package Dimensions

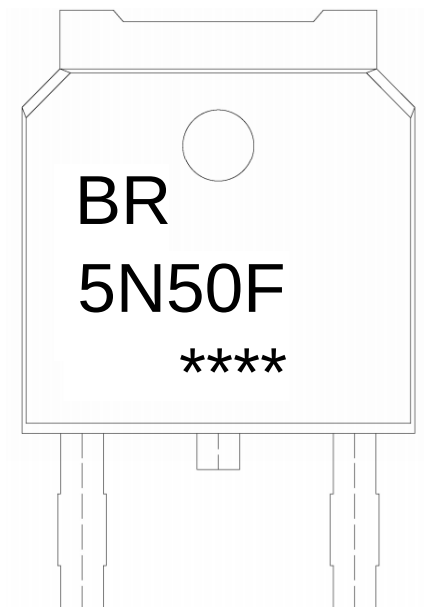


单位: mm

Symbol		Dimensions In Millimeters		Symbol		Dimensions In Millimeters	
		Min	Max			Min	Max
A	2.20	2.20	2.40	B	0.95	1.25	e1
b	4.43	4.43	4.72	b1	0.70	0.90	e2
C	9.85	10.35			0.45	0.55	L1
C	0.45	0.55		I2	1.70	2.00	
D	6.75	13	0.60	0.90			
D1	5.50	6	0.00	0.10	D1	6.45	5.1

T0-252

/ Marking Instructions



BR

5N50F

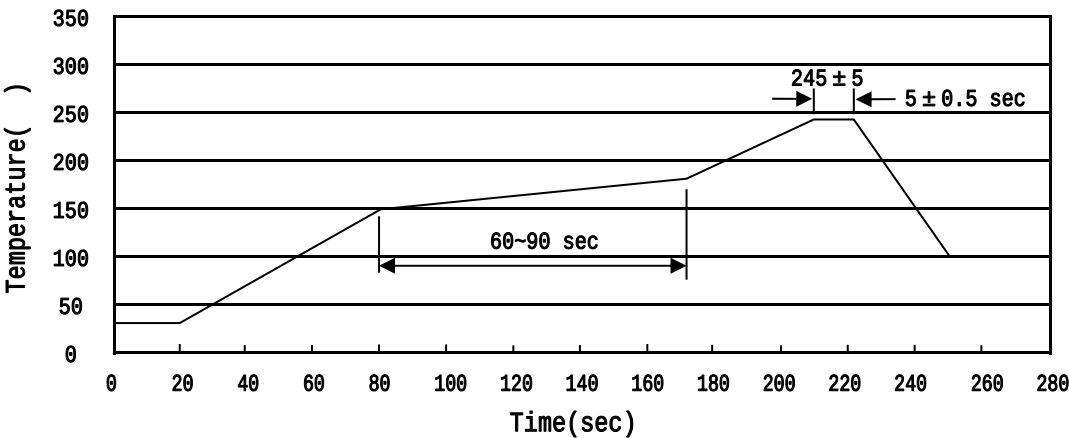
Note:

BR: Company Code

5N50F: Product Type Code

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

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|----|-----------|--|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180 °C , Time:60~90sec. |
| 2 | 245±5 | | | 5±0.5sec; | 2.Peak Temp.:245±5 °C , Duration:5±0.5sec. |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 °C/sec. |

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
TO-252	2,500	2	5,000	6	30,000	13" ×16	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ Notices