



/ Revised record

A	2022.6.22	ALL	AOS-AOD32326		

/ Descriptions

TO-252 N MOS

N-Channel Enhancement Mode Field Effect Transistor in a TO-252 Plastic Package.

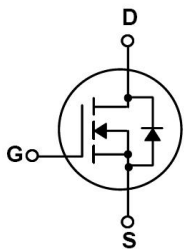
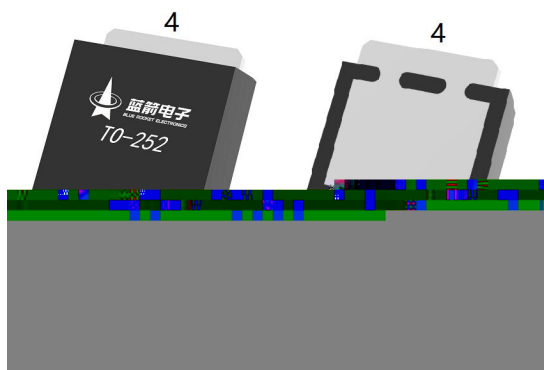
/ Features $V_{DS} (V) = 30V$ $I_D = 67A (V_{GS} = \pm 20V)$ $R_{DS(ON)}@10V \leq 6m\Omega$

HF Product.

/ Applications

DC/DC

DC/DC Converters in Computing, Suitable for general purpose.

/ Equivalent Circuit**/ Pinning**

PIN1 G

PIN 2 D

PIN 3 S

PIN 4 D

/ Marking

See Marking Instructions.



Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	30	V
Drain Current		$I_D(T_C=25^{\circ}\text{C})$	67	A
Drain Current - Pulsed		I_{DM}	140	A
Gate-Source Voltage		V_{GSS}	± 20	V
Single Pulsed Avalanche Energy(L=0.5mH)		E_{AS}	185	mJ
Avalanche Current		I_{AS}	21.5	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	$^{\circ}\text{C}$
Junction-to-Ambient	$t \leq 10$	$R_{\theta JA}$	20	$^{\circ}\text{C/W}$
Junction-to-Ambient	Steady-State		50	
Junction-to-Case	Steady-State	$R_{\theta JC}$	2.8	

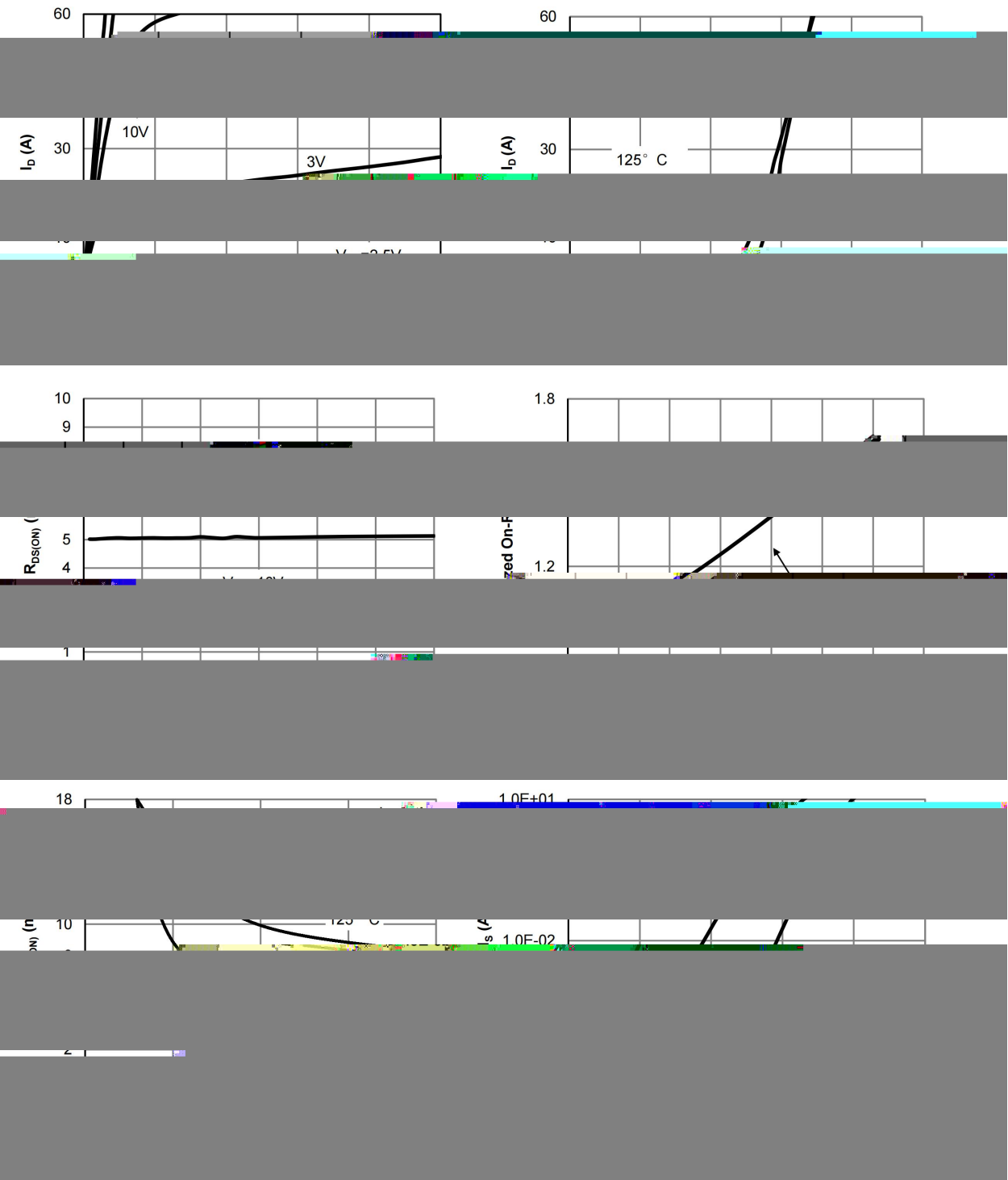
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	30	32		V V



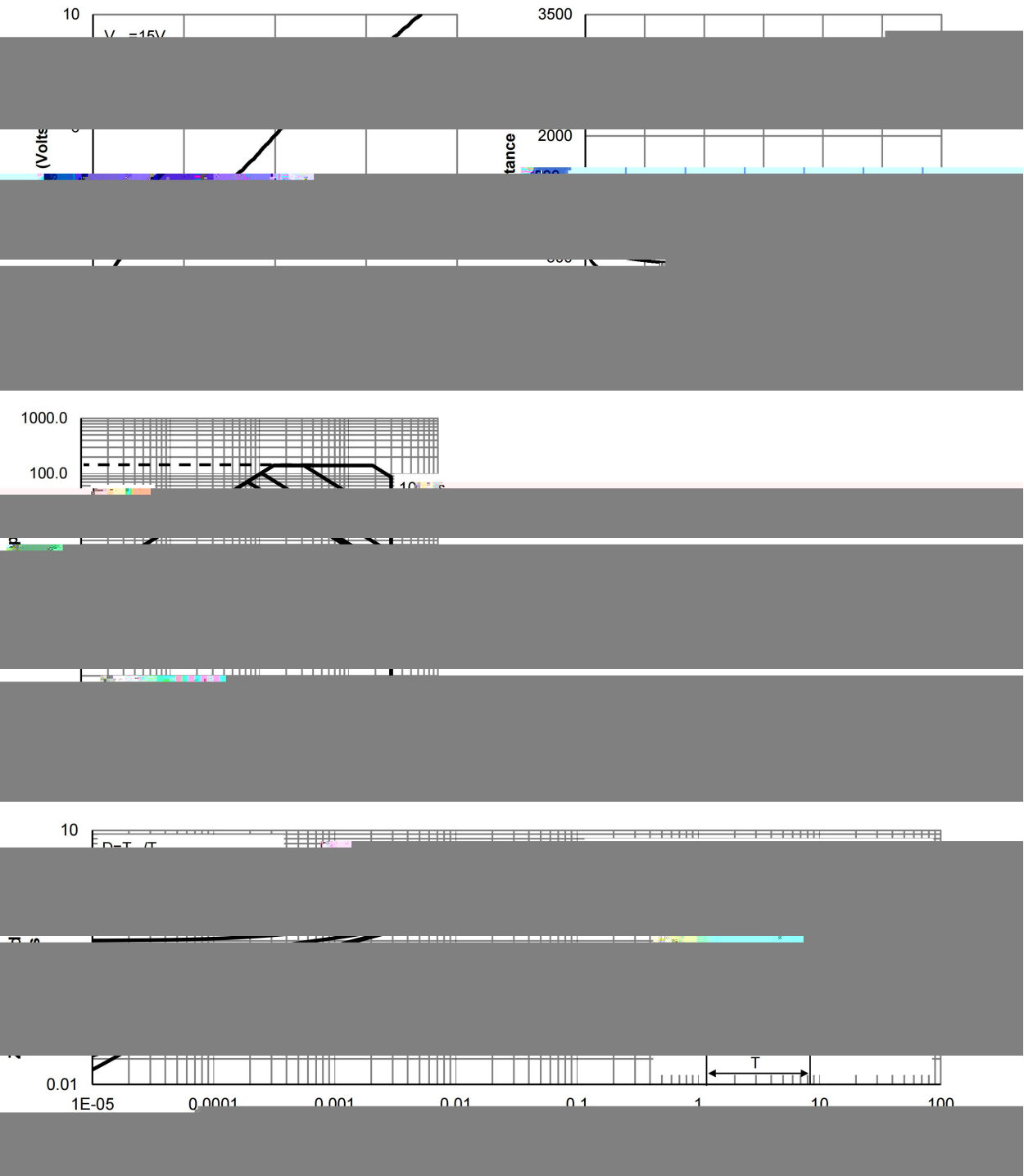
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V$ $V_{DS}=15V$ $I_D=20A$		38		nC
Total Gate Charge	$Q_{g(4.5V)}$			18		
Gate Source Charge	Q_{gs}			10		
Gate Drain Charge	Q_{gd}			4		
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=10V$ $V_{DS}=15V$ $R_L=0.75\Omega$ $R_{GEN}=3\Omega$		10		ns
Turn-On Rise Time	t_r			15		
Turn-Off Delay Time	$t_{d(off)}$			36		
Turn-Off Fall Time	t_f			9		

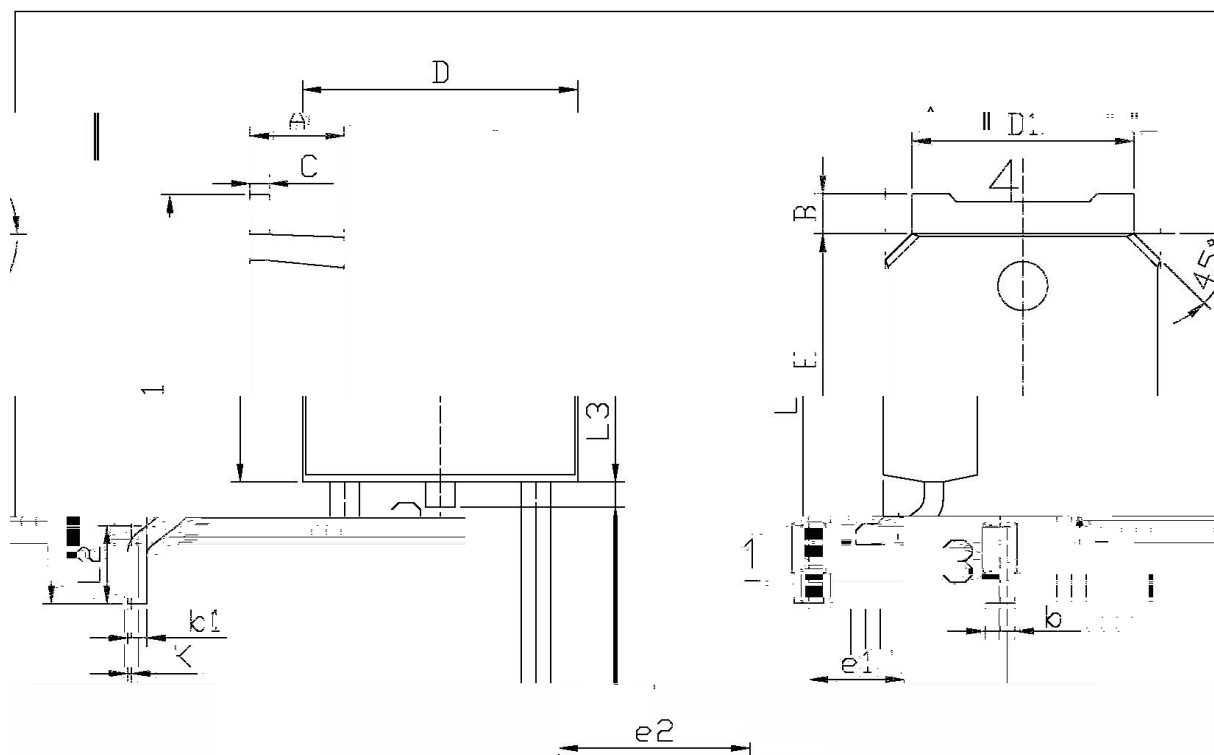
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve



/ Package Dimensions

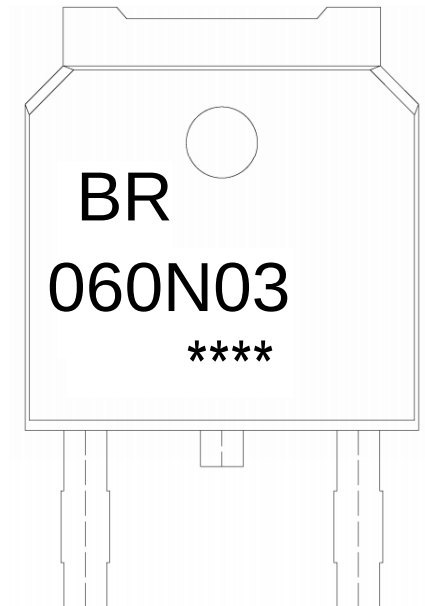


单位: mm

Dimensions in Millimeters		Dimensions in Inches	
Max.	Min.	Max.	Min.
5.95	6.25	2.20	2.40
2.24	2.34	0.95	1.25
4.43	4.73	3.75	3.90
9.85	10.35	0.45	0.55
1.70	2.00	0.45	0.55
3.1	0.60	0.90	6.45
3.10	0.60	0.90	6.45

ТН-252

/ Marking Instructions



BR

060N03

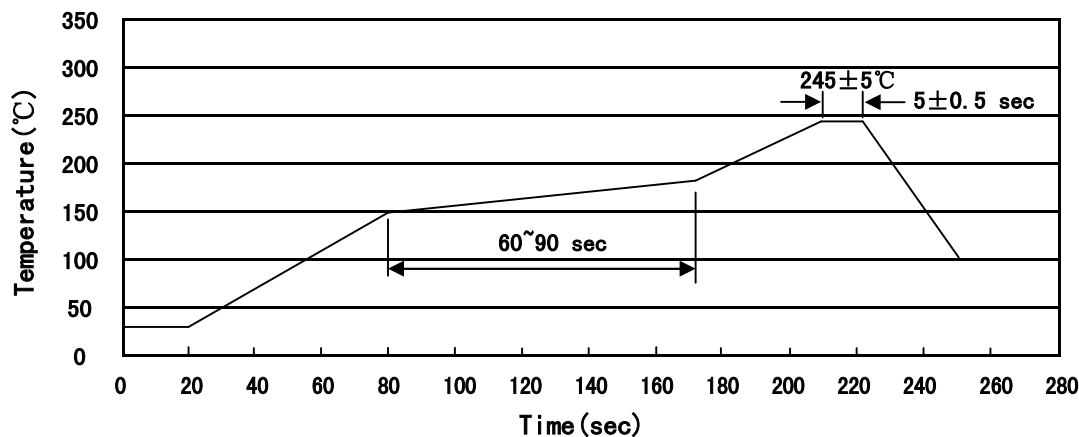
Note:

BR: Company Code

060N03: 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°C/sec. | | 3. Cooling Speed: 2~10°C/sec. |

/ Resistance to Soldering Heat Test Conditions

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

/ Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
TO-252	2,500	2	5,000	6	30,000	13" ×16	360×360×50	380×335×366

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ Notices