



版本	修订日期	有修订的页码	修订涉及的内容	拟制	审核
A	2022.1.13	ALL	参照 AOS-AOD66616 规格书创建本厂规格书	庞隆基	陈逸晞



TO-252 塑封封装 N 沟道场效应管。

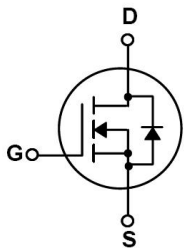
N-CHANNEL MOSFET in a TO-252 Plastic Package.

$R_{DS(on)}$ 小，门电荷低， C_{rss} 小，开关速度快，无卤产品。

Low $R_{DS(on)}$, low gate charge, low C_{rss} , fast switching, Halogen-free Product.

用于低压电路如：汽车电路、DC/DC 转换、便携式产品的电源高效转换。

Suited for low voltage applications such as automotive, DC/DC Converters, and high efficiency switching for power management in portable and battery operated products.



PIN1 : G

PIN 2 : D

PIN 3 : S

PIN 4 : D

见印章说明。

See Marking Instructions.



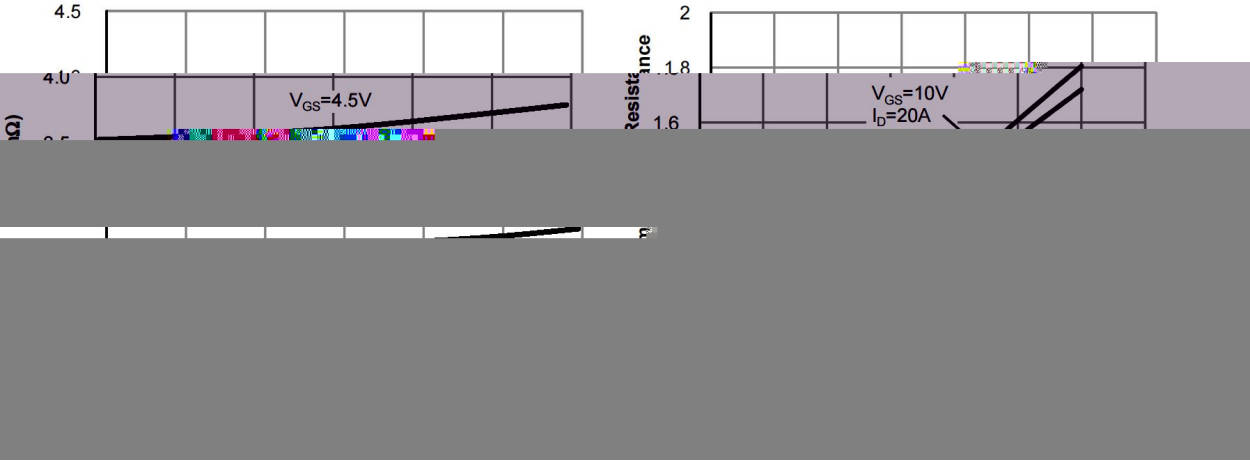
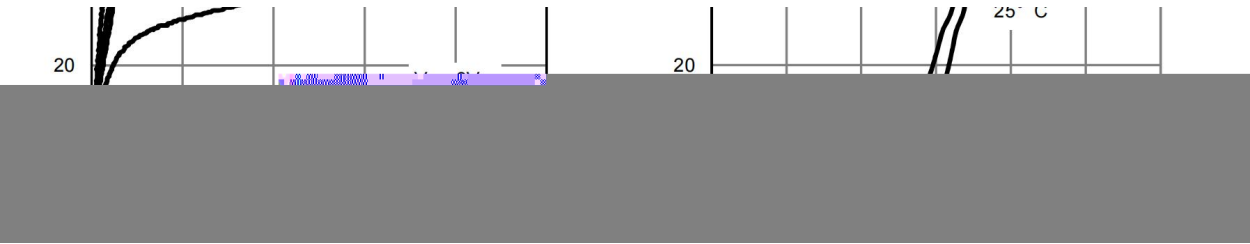
参数 Parameter		符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage		V_{DSS}	60	V
Drain Current		$I_D(T_c=25^{\circ}\text{C})$	70	A
Drain Current - Pulsed		I_{DM}	280	A
Gate-Source Voltage		V_{GS}	± 20	V
Avalanche Current		I_{AS}	44	A
Single Pulsed Avalanche Energy(L=0.5mH)		E_{AS}	677.6	mJ
Power Dissipation		$P_D(T_c=25^{\circ}\text{C})$	113	W
Storage Temperature Range		T_{stg}	-55~150	$^{\circ}\text{C}$
Thermal Resistance-Junction to Ambient	$t \leq 10\text{s}$	$R_{\theta JA}$	20	$^{\circ}\text{C/W}$
	Steady-State		50	
Thermal Resistance-Junction to Case	Steady-State	$R_{\theta JC}$	1.1	

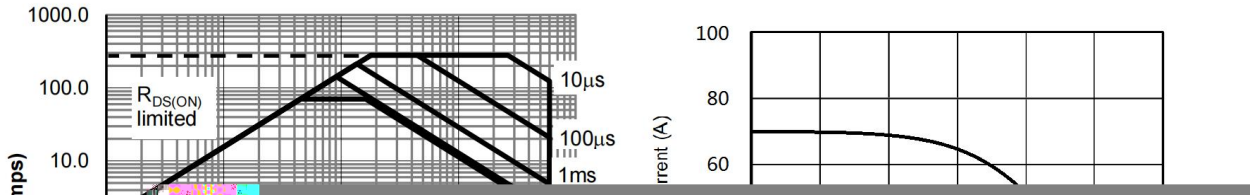
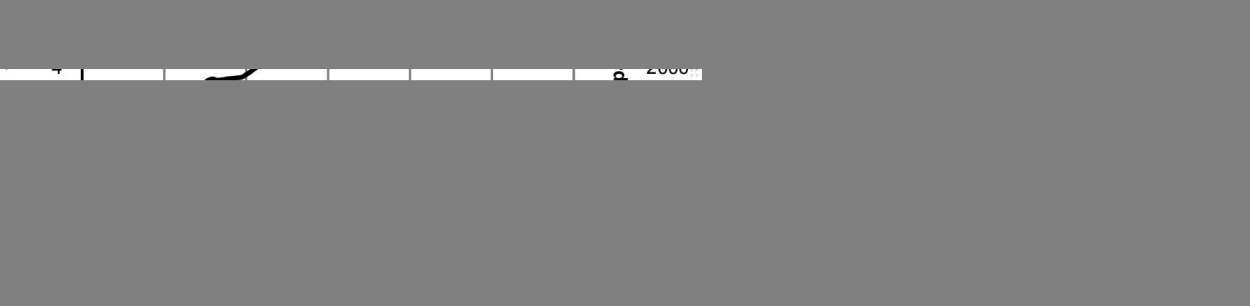
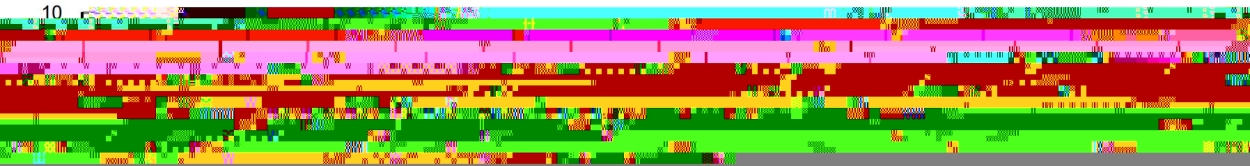
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0\text{V}$ $I_D=250\mu\text{A}$	60	68		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60\text{V}$ $V_{GS}=0\text{V}$			1.0	μA
		$V_{DS}=48\text{V}$ $T_C=150^{\circ}\text{C}$			10	
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20\text{V}$ $V_{DS}=0\text{V}$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu\text{A}$	1.0	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}$ $I_D=20\text{A}$		2.9	3.5	m Ω
		$V_{GS}=4.5\text{V}$ $I_D=10\text{A}$		3.7	5.0	
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0\text{V}$ $I_S=1\text{A}$			1.2	V
Gate resistance	R_g	$V_{GS}=0\text{V}$ $V_{DS}=0\text{V}$, $f=1\text{MHz}$		1.0		Ω
Input Capacitance	C_{iss}	$V_{DS}=25\text{V}$ $V_{GS}=0\text{V}$ $f=1.0\text{MHz}$		3450		pF
Output Capacitance	C_{oss}			1700		
Reverse Transfer Capacitance	C_{rss}			100		
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10\text{V}$, $V_{DS}=30\text{V}$, $I_D=20\text{A}$		60		nC
Total Gate Charge	$Q_{g(4.5V)}$			23		
Gate Source Charge	Q_{gs}			16		
Gate Drain Charge	Q_{gd}			3		

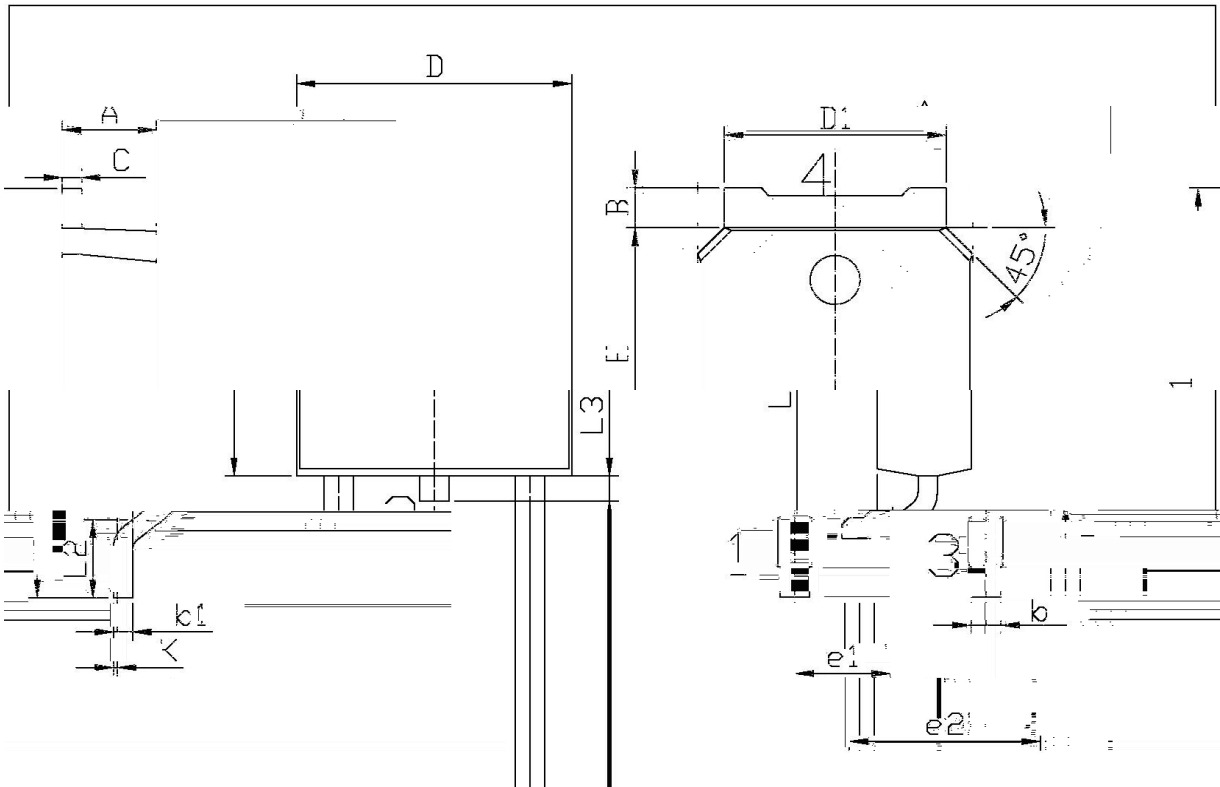


参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=30V$ $R_L=1.5\ \Omega$ $R_{GEN}=3\ \Omega$		13		ns
Turn-On Rise Time	t_r			4		
Turn-Off Delay Time	$t_{d(off)}$			47		
Turn-Off Fall Time	t_f			6.5		

-E





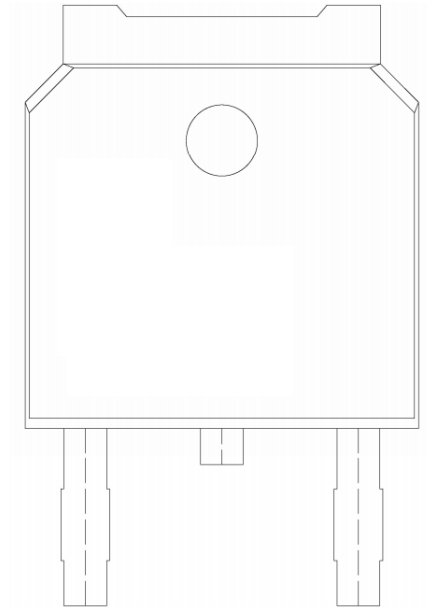


单位: mm

ISIRI TECHNICAL DRAWING		T - MILLIMETER		DIMENSIONS		MILLIMETER	
Max	Min	Max	Min	Max	Min	Max	Min
5.20	5.17	6.25	6.22	0.95	0.92	11.25	11.22
2.24	2.21	2.37	2.34	0.70	0.67	0.30	0.27
9.85	9.82	10.35	10.32	0.45	0.42	0.55	0.52
2.00	1.97	0.75	0.72	0.45	0.42	0.55	0.52
0.60	0.57	0.90	0.87	D	6.45	6.75	L3
0.80	0.77	0.10	0.07	D	5.80	5.70	0.60

1-252

TF



说明：

BR： 为公司代码

035N06S： 为型号代码

****： 为生产批号代码，随生产批号变化。

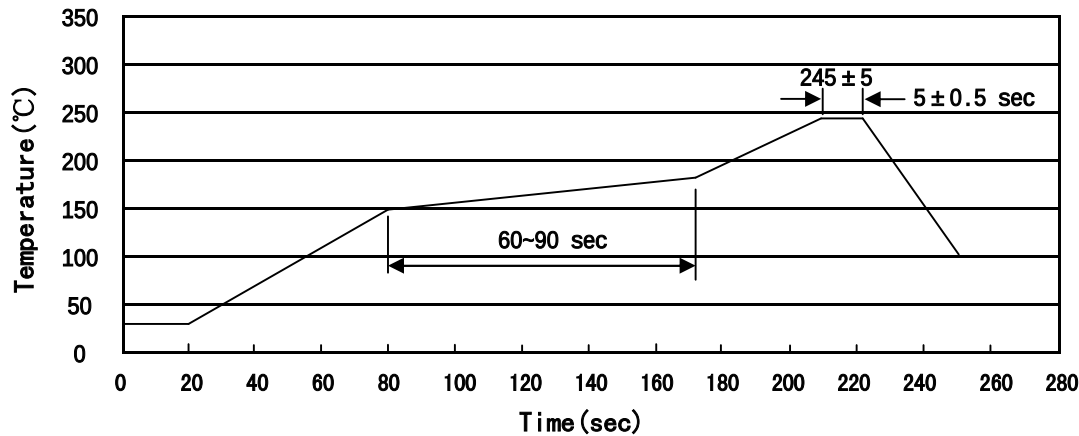
Note:

BR: Company Code

035N06S: Product Type Code.



Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

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

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

/ 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