



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。

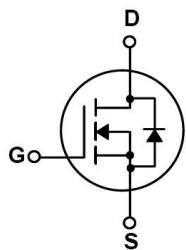
N-CHANNEL MOSFET in a TO-252 Plastic Package.

$R_{DS(on)}$ 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.

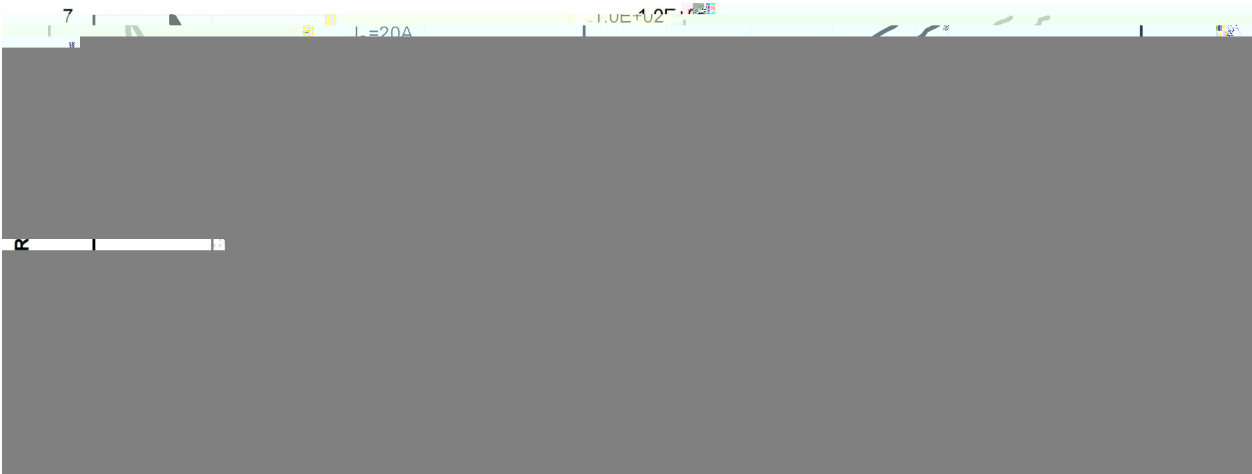
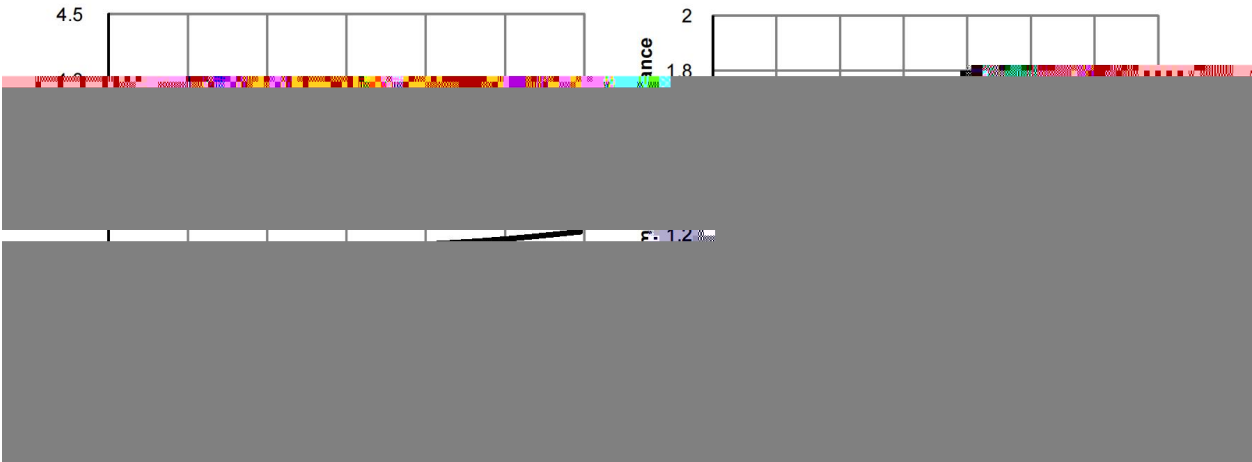
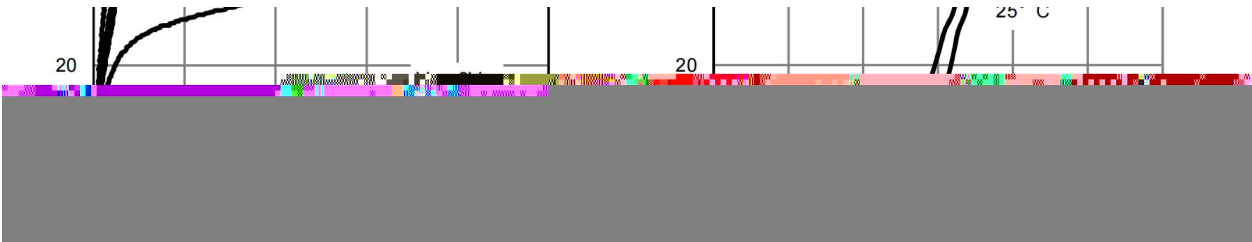


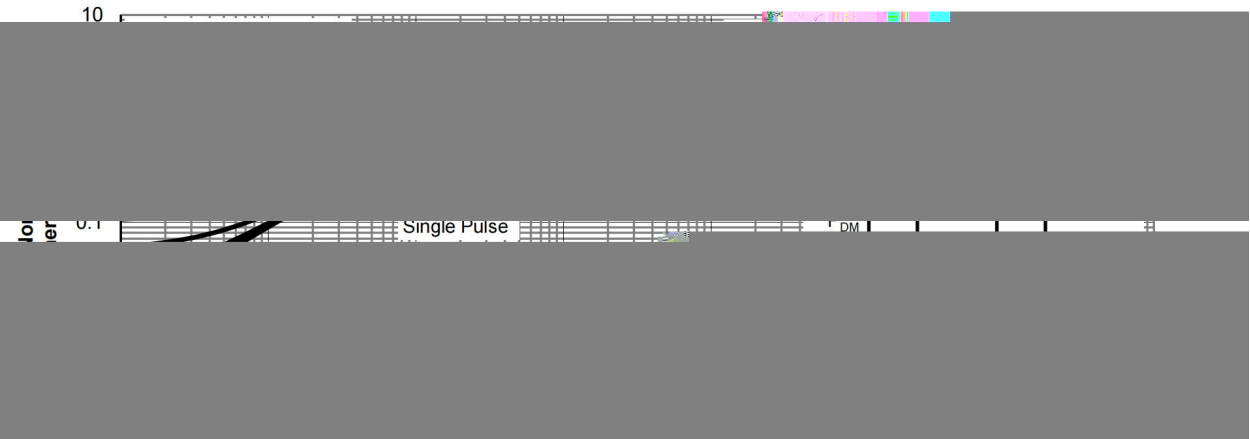
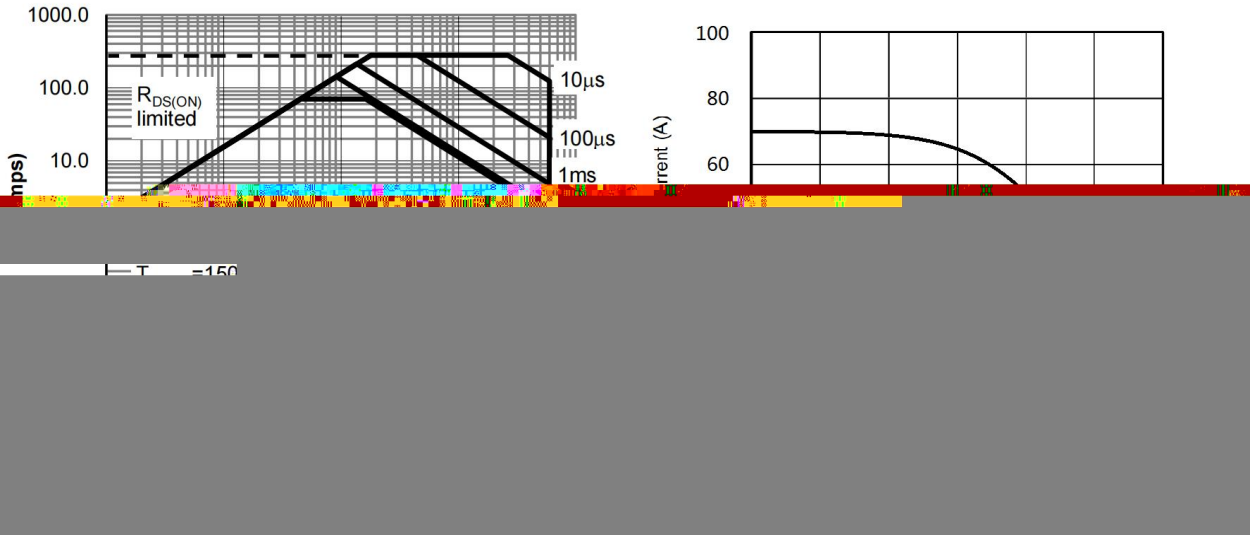
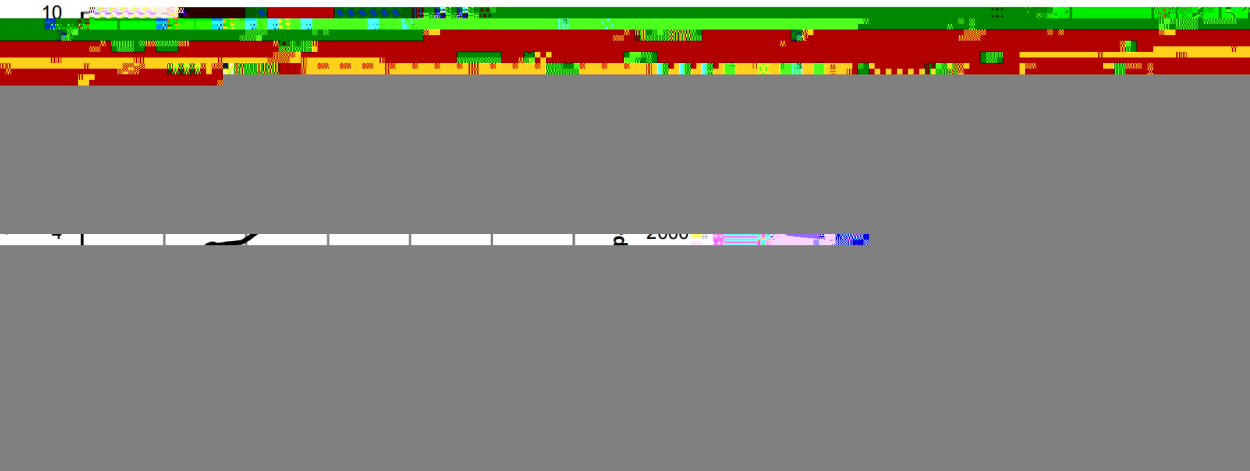
参数 Parameter		符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage		V _{DSS}	60	V
Drain Current		I _D (Tc=25℃)	70	A
Drain Current - Pulsed		I _{DM}	280	A
Gate-Source Voltage		V _{GS}	±20	V
Avalanche Current		I _{AS}	44	A
Single Pulsed Avalanche Energy(L=0.5mH)		E _{AS}	677.6	mJ
Power Dissipation		P _D (Tc=25℃)	113	W
Storage Temperature Range		T _{stg}	-55~150	℃
Thermal Resistance-Junction to Ambient	t≤10s	R _{θJA}	20	℃/W
	Steady-State		50	
Thermal Resistance-Junction to Case	Steady-State	R _{θJC}	1.1	

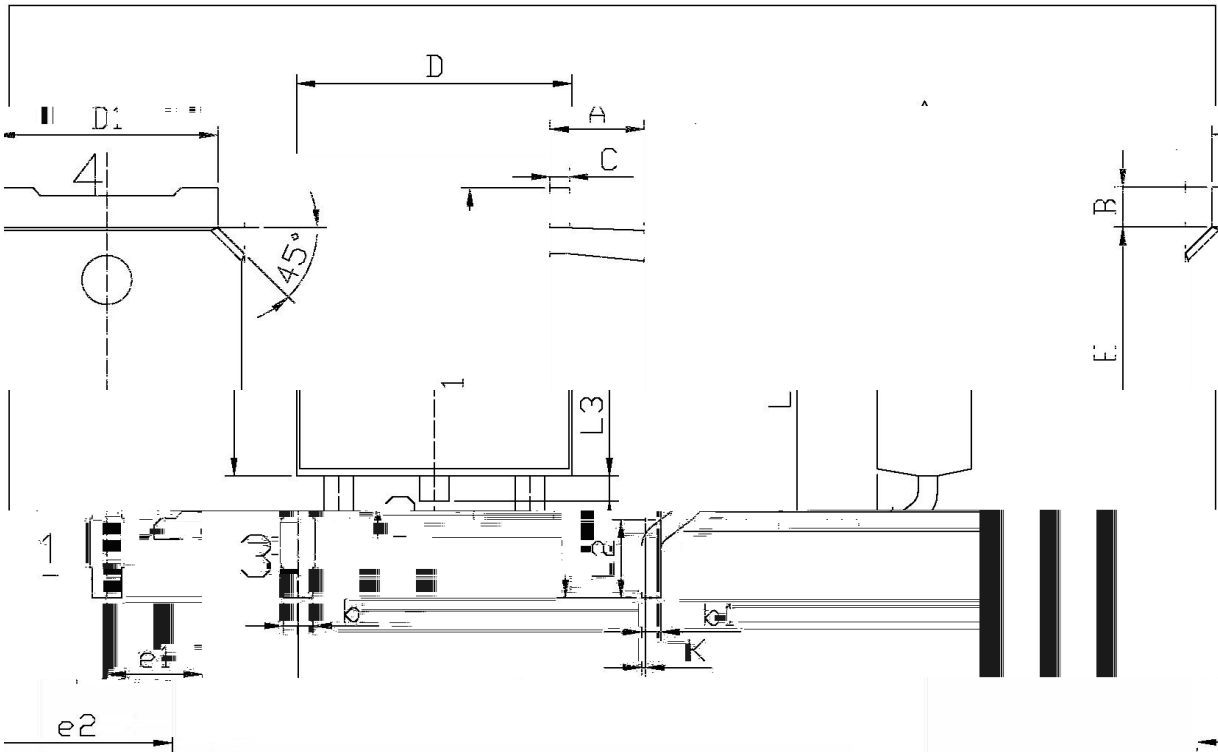
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0\text{V}$ $I_D=250\mu\text{A}$	60	68		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60\text{V}$ $V_{GS}=0\text{V}$			1.0	μA
		$V_{DS}=48\text{V}$ $T_C=150^{\circ}\text{C}$			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		



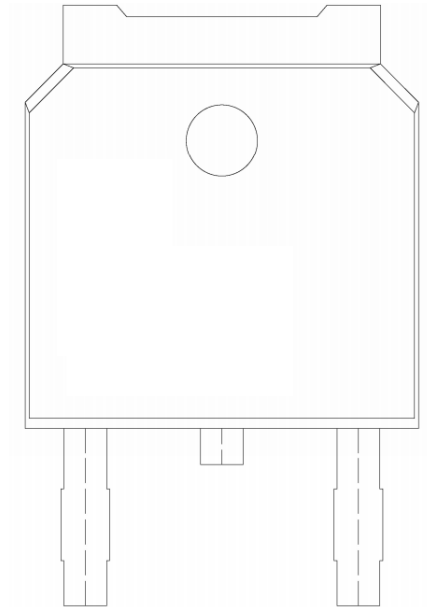




单位: mm

Dimensions in Millimeters				Dimensions in Millimeters			
Symbol	Max	Min	Symbol	Max	Min	Symbol	Max
E	5.95	6.25	A	2.20	2.40		
e1	2.24	2.34	B	0.95	1.25		
e2	10.43	11.40	b	0.70	0.90		
L1	9.85	10.35	h1	0.45	0.55		
	2.00	0.75	L2	1.20	1.70		
	6.75	L3	0.60	0.90	D	6.45	
	5.50	5.80		0.10	0.30		5.40

IN-252



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。

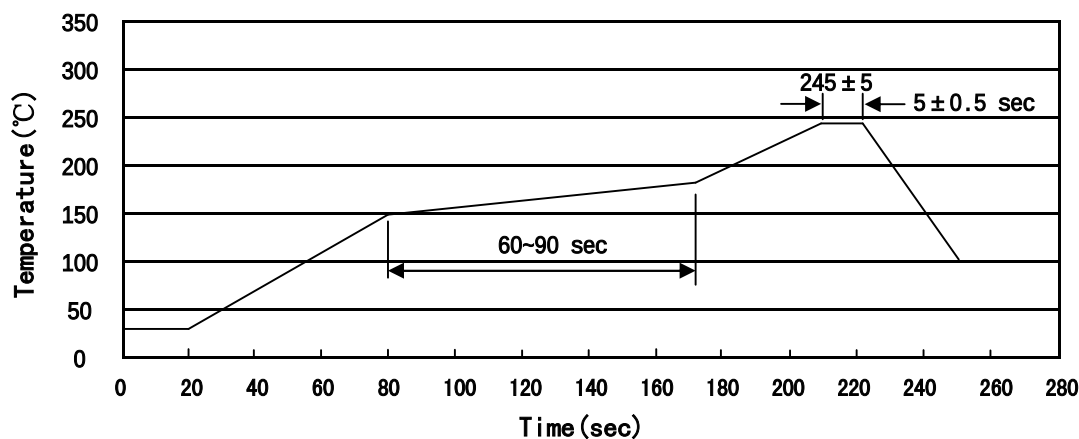
Note:

BR: Company Code

035N06S: Product Type Code.



Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

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

260 ± 5

10 ± 1 sec.

Temp.: 260 ± 5 °C

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