



D	2015-11				
E	2022-4-22	1			

AOS-AOD 380A 60

F 2022.4.21 ALL

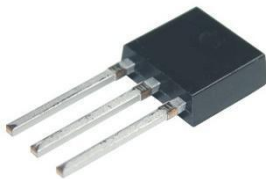
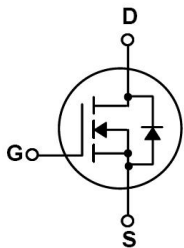


TO-251 N 650V
N-CHANNEL 650V Super-Junction Power MOSFET in a TO-251 Plastic Package.

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

DC/DC

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

See Marking Instructions.

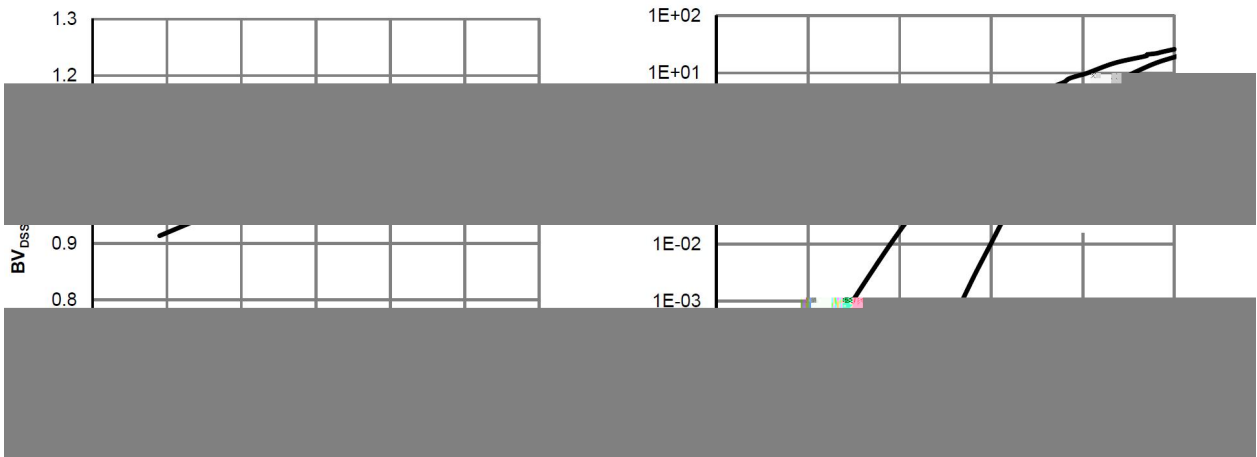
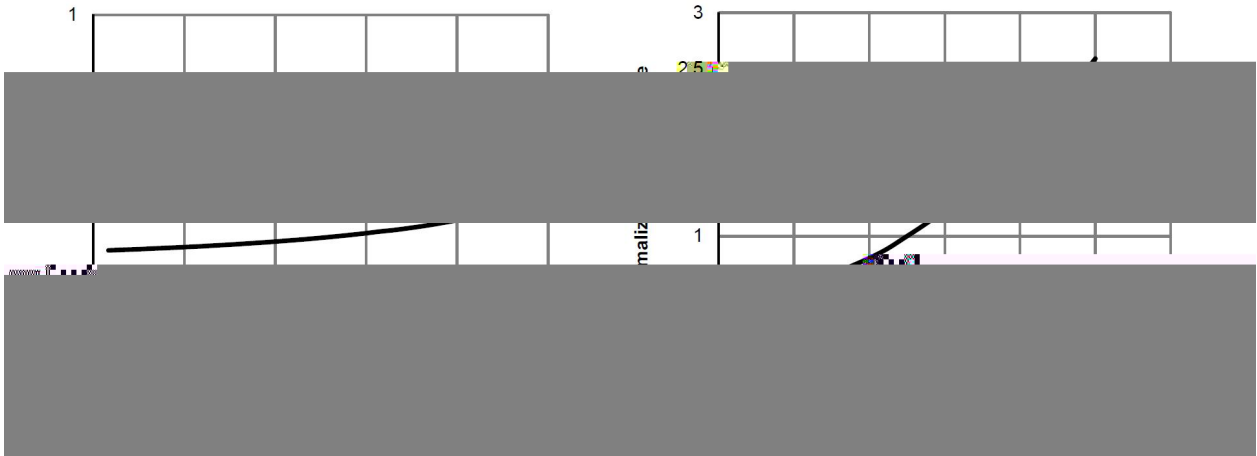
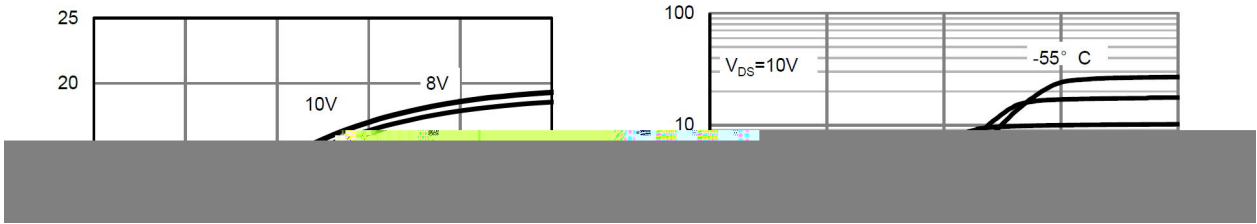


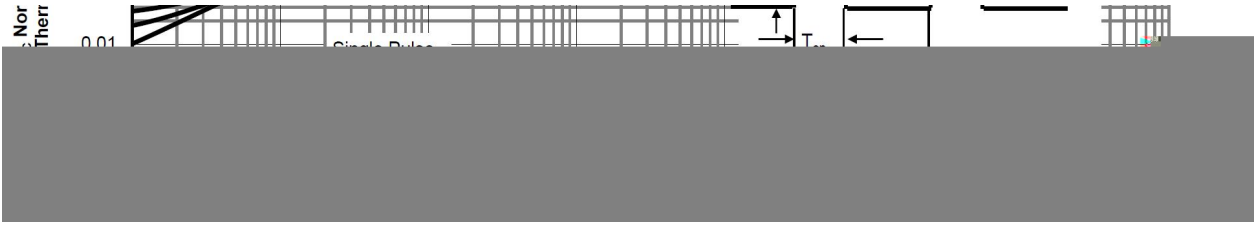
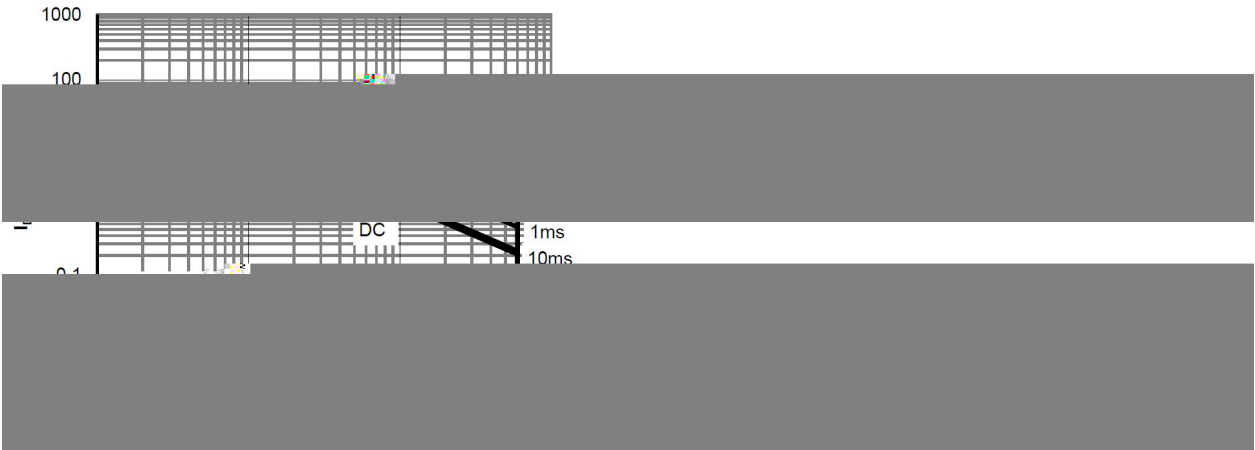
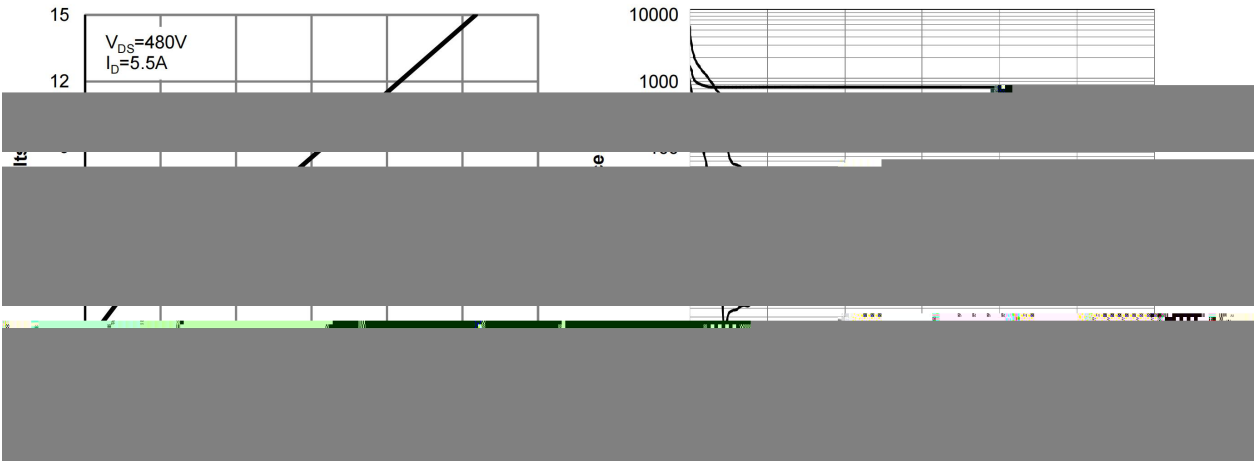
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	650	V
Drain Current	$I_D(T_c=25^\circ C)$	11	A
Drain Current - Pulsed	I_{DM}	44	A
Gate-Source Voltage	V_{GS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	277	mJ
Avalanche Current	I_{AS}	8	A
Power Dissipation	$P_D(T_c=25^\circ C)$	125	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^\circ C$
Junction-to-Case	$R_{\theta JC}$	1	$^\circ C/W$
Junction-to-Ambient	$R_{\theta JA}$	55	$^\circ C/W$

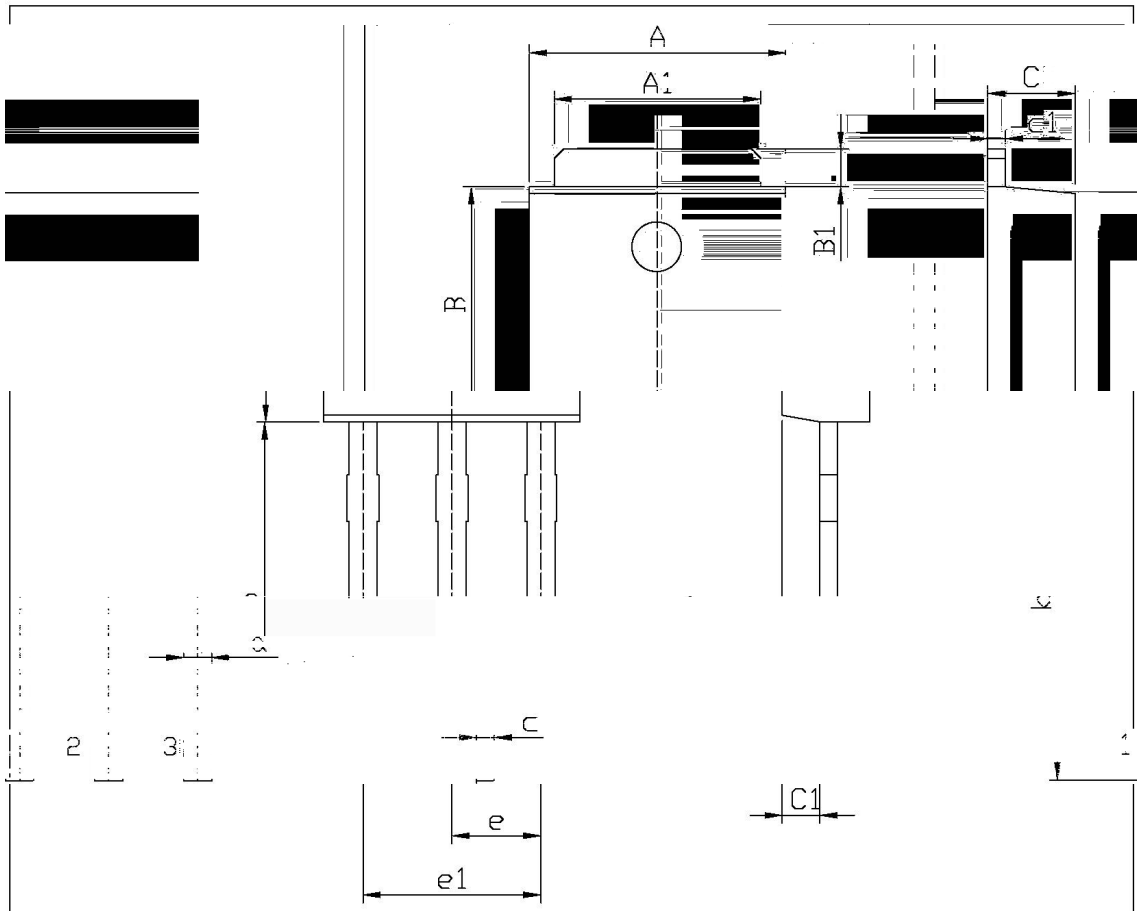
Parameter	Symbol	Test Conditions	Min	Typ
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	650	700
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=650V$ $V_{GS}=0V$ $T_J=25^\circ C$		
Gate-Body Leakage Current, Forward	I_{GSS}	$V_{GS}=\pm 30V$		
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	2.5	3.3



Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Continuous Diode Forward Current	I_S				11	A
Total Gate Charge	Q_g	$V_{DS}=480V$ $I_D=5.5A$ $V_{GS}=10V$		18		nC
Gate-Source Charge	Q_{gs}			7		nC
Gate-Drain Charge	Q_{gd}			4.5		nC

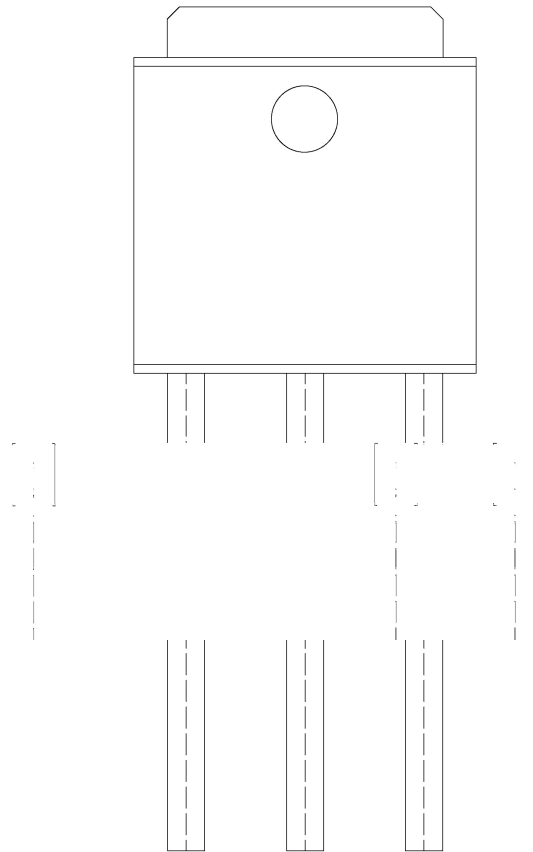






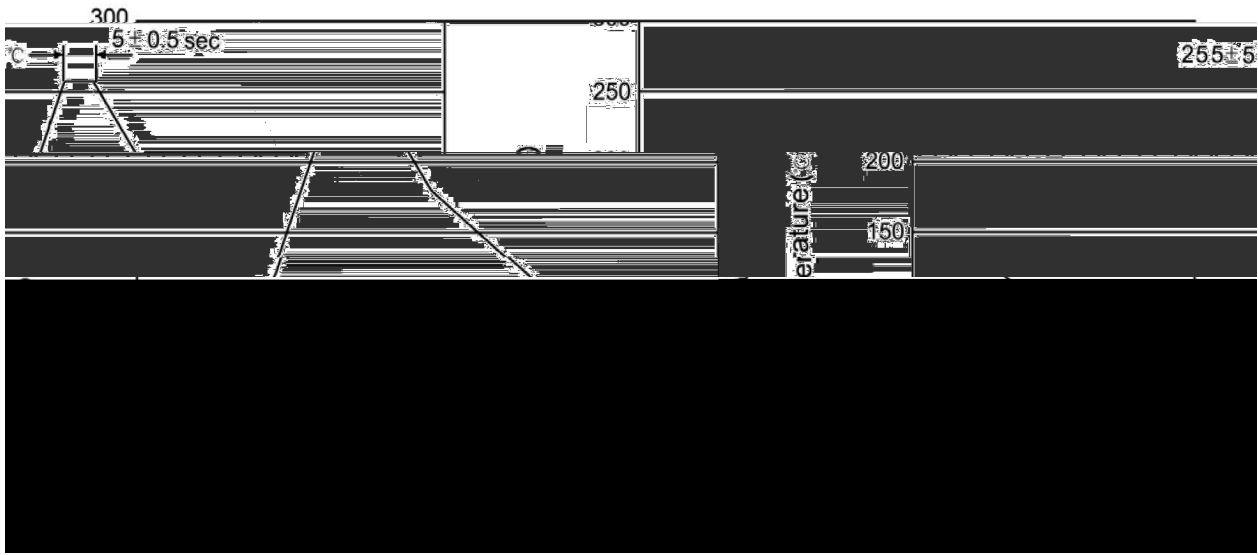
单位: mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
B1	0.95	1.25	c1	0.45	0.55
e1	4.43	4.73			





Temperature Profile for IR Reflow Soldering(Pb-Free)



- | | | | | | | |
|---|-------|-----|-----------|--------|-------|--|
| 1 | 25 | 150 | 60 | 90sec; | Note: | 1.Preheating:25~150°C, Time:60~90sec. |
| 2 | 255±5 | | 5±0.5sec; | | | 2.Peak Temp.:255±5°C, Duration:5±0.5sec. |
| 3 | | 2 | 10°C/sec. | | | 3. Cooling Speed: 2~10°C/sec. |

270±5°C 10±1 sec. Temp.:270±5 Time:10±1 sec

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag 袋	Inner Box 盒	Outer Box 箱
T0-251	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube 套管	Inner Box 盒	Outer Box 箱
T0-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180