





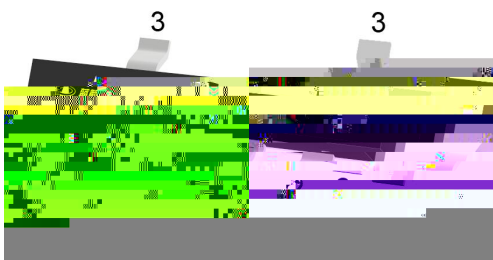
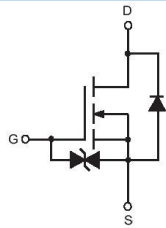
Rev.C Jul.-2022

SOT-23 N MOS
N-CHANNEL MOSFET in a SOT-23 Plastic Package.

2KV AEC-Q101

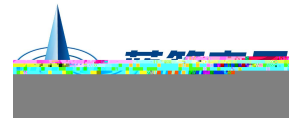
Sensitive gate trigger current and Low Holding current.ESD protected up to 2KV, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

Intended for use in general purpose switching and phase control applications, Meet the stringent requirements of automotive applications.



PIN 1 G PIN 2 S PIN 3 D

Marking	702Q2
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Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	60	V
Drain-Gate Voltage	V_{DGR}	60	V
Drain Current - Continuous	$I_D (T_a=25^\circ C)$	300	mA
	$I_D (T_a=85^\circ C)$	210	
Drain Current - Pulsed(Note 1)	I_{DM}	1200	mA
Gate-Source Voltage - Continuous	V_{GSS}	± 20	V
Power Dissipation	P_D	350	mW
Junction Temperature Range	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$
Maximum Junction-to-Ambient(Note 2)	$R_{\theta JA}(\text{Steady State})$	300	$^\circ C/W$
	$R_{\theta JA}(t \leq 5s)$	92	

Note 1) Pulse Width 10us, Duty Cycle 1%

Note 2) Surface-mounted on FR4 board using 1 sq in pad size with 1 oz Cu

Parameter Symbol



Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(ON)}$	VGS =10V, VDD=25V, ID=500mA, RG=25 Ω		12.2		ns
Rise Time	t_r			9.0		
Turn-Off Delay Time	$t_{d(OFF)}$			55.8		
Fall Time	t_f			29		

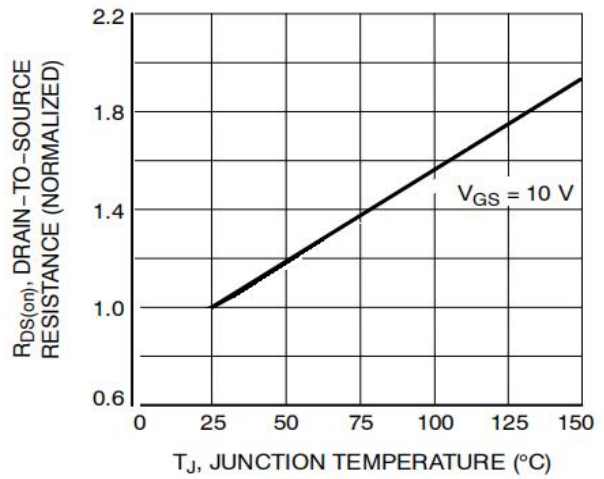
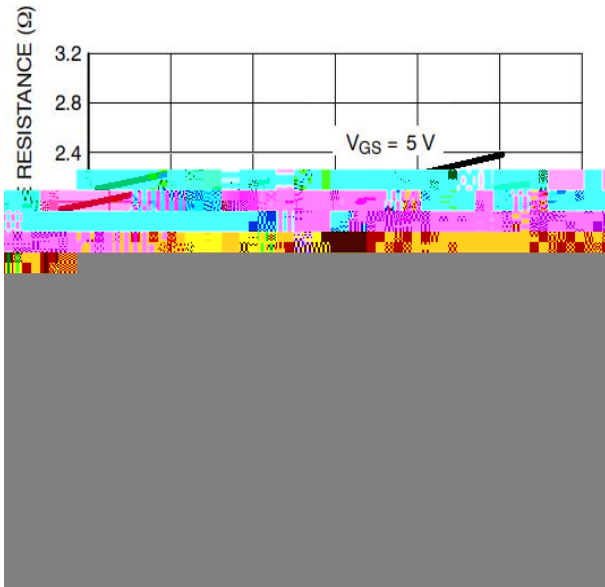
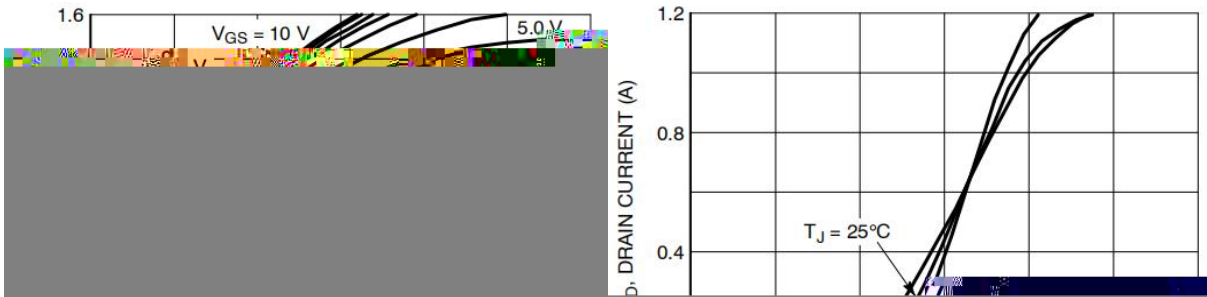


Figure 4 On-Resistance Variation with Temperature



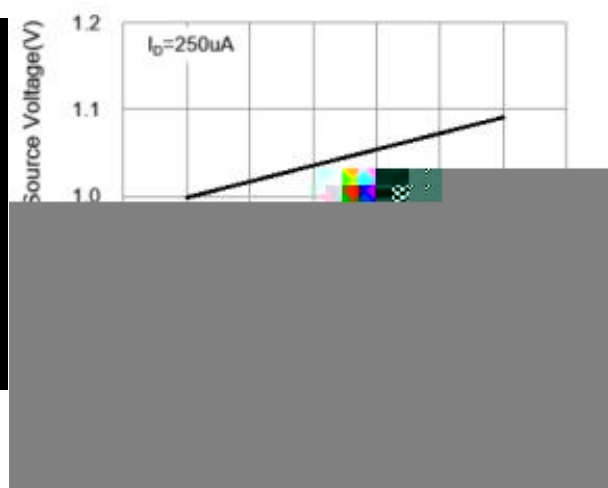
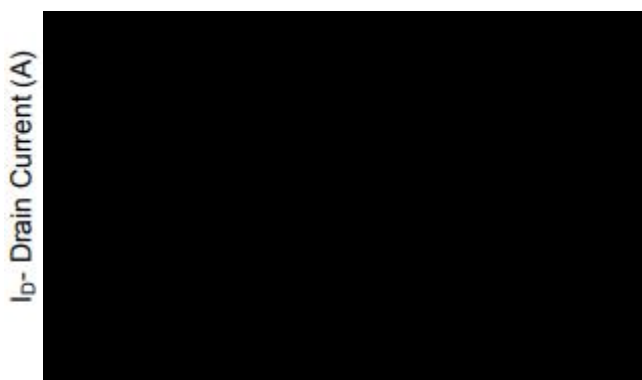
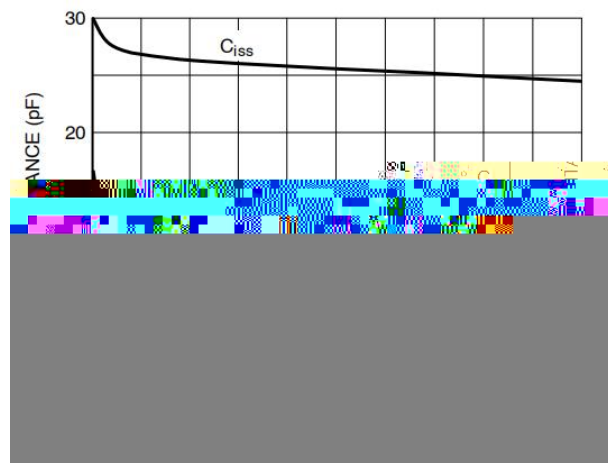
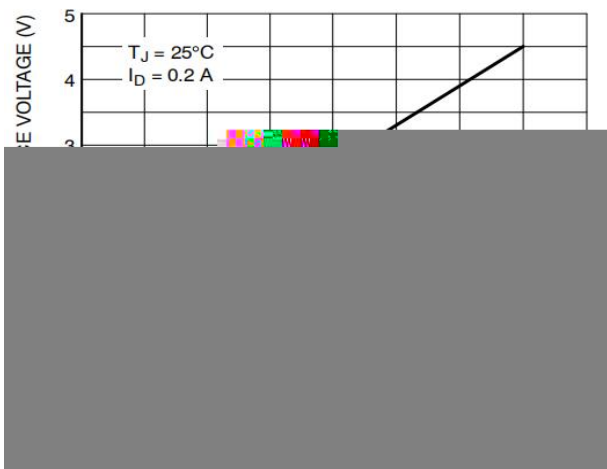
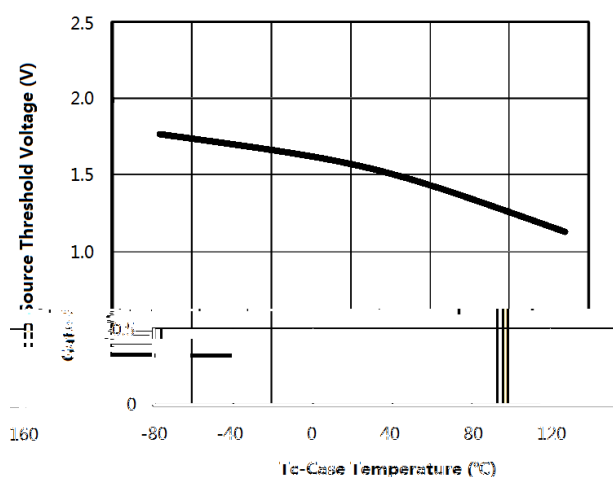
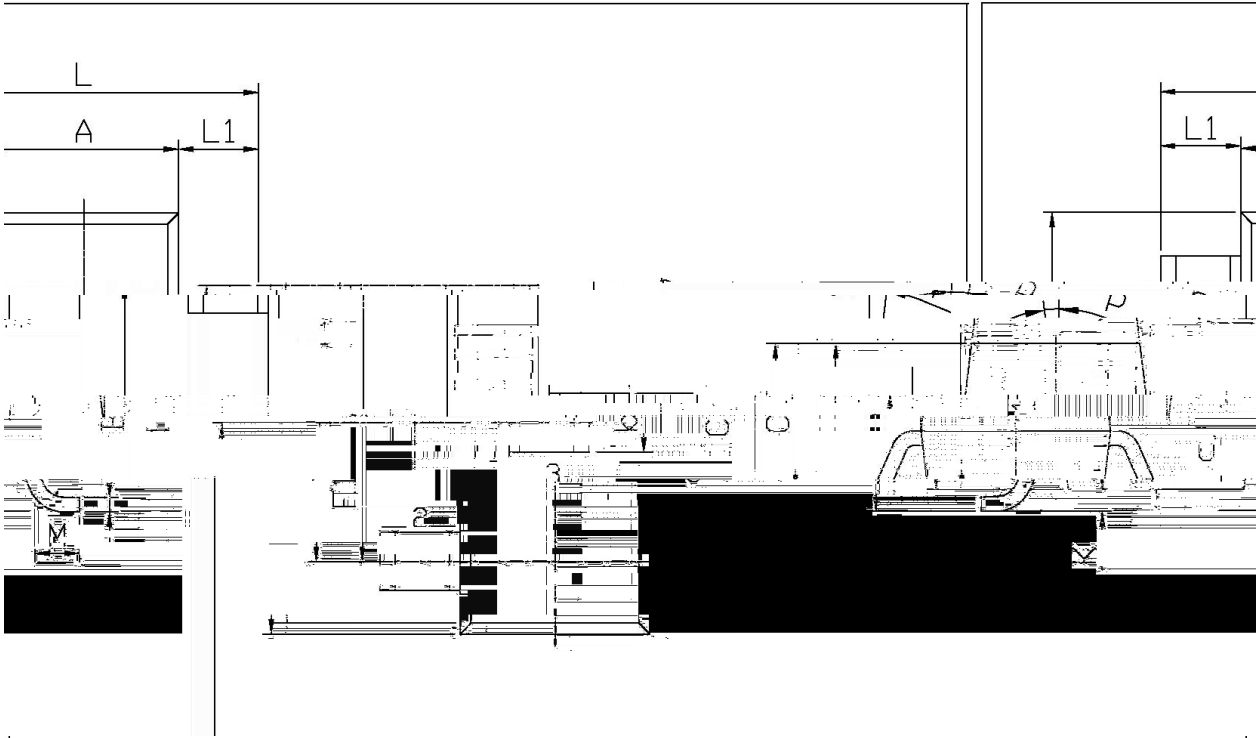


Figure 9 : Safe Operation Area

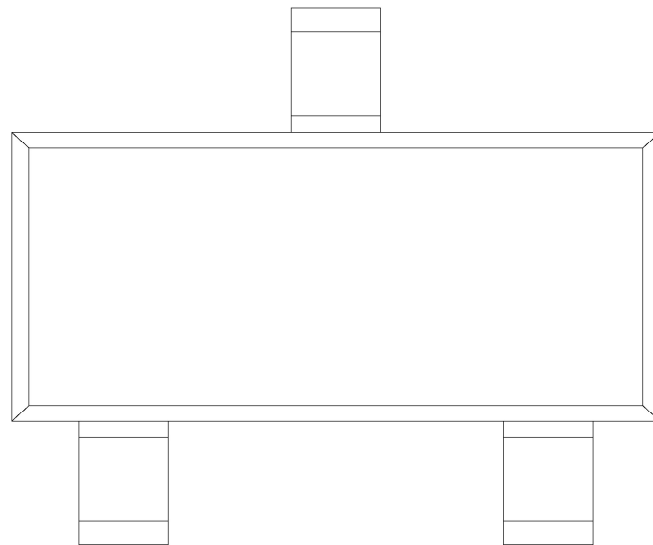




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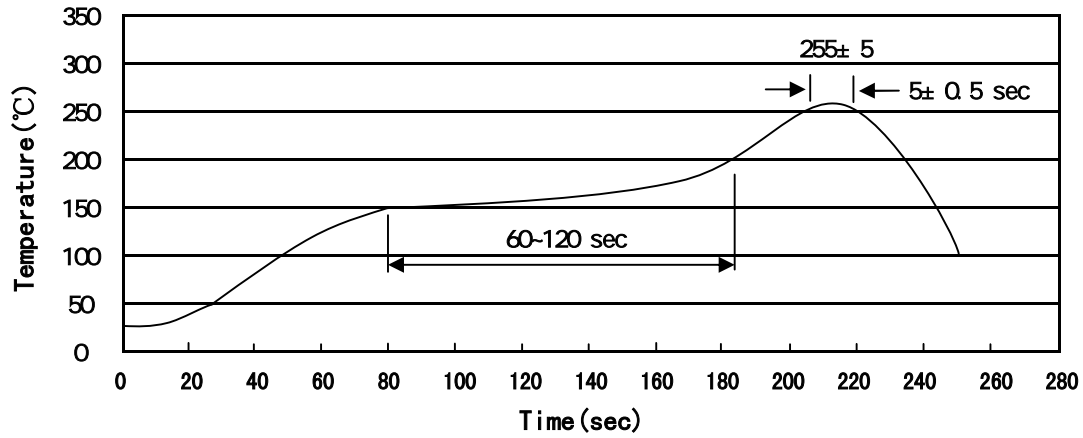


Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
	0.45	0.65	C1	0.90	1.20
A	1.65	1.50	C2	0.05	0.20
B	2.70	3.10	K	0.10	0.10
	0.85	0.05			
	0.35	0.55			





Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 150~200°C，时间 60~120sec;
- 2、峰值温度 255±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2~10°C/sec.

Note:

- 1.Preheating:150~200°C, Time:60~120sec.
- 2.Peak Temp.:255±5°C, Duration:5±0.5sec.
- 3. Cooling Speed: 2~10°C/sec.

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

卷盘包装 / 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
SOT-23	3,000	10	30,000	6	180,000	7" x8	180x120x180	390x385x205