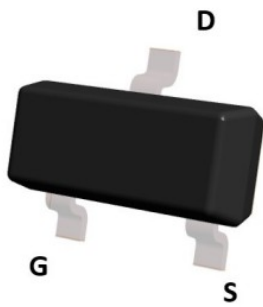
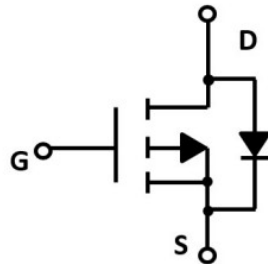
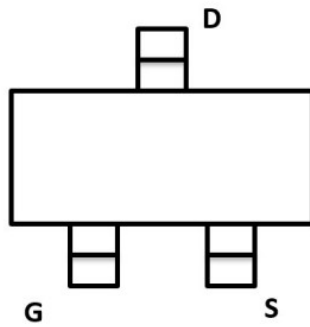


P-Channel Enhancement Mode Field Effect Transistor



Top View

SOT-23



Product Summary

- V_{DS} -60V
- I_D -0.17A
- $R_{DS(ON)}$ (at $V_{GS}=-10V$) <8 ohm
- $R_{DS(ON)}$ (at $V_{GS}=-4.5V$) <9.9ohm

General Description

- Trench Power LV MOSFET technology
- Low $R_{DS(ON)}$
- Low Gate Charge

Applications

- Video monitor
- Power management

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-source Voltage	V_{DS}	-60	V
Gate-source Voltage	V_{GS}	± 20	V
Drain Current	I_D	$T_A=25^\circ\text{C}$ @ Steady State	-0.17
		$T_A=70^\circ\text{C}$ @ Steady State	-0.14
Pulsed Drain Current ^A	I_{DM}	1.2	A
Total Power Dissipation @ $T_A=25^\circ\text{C}$	P_D	0.35	mW
Thermal Resistance Junction-to-Ambient @ Steady State ^B	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^\circ\text{C}$

Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ELV603R3PO	F2	E3R3P	3000	30000	120000	7'feet

Electrical Characteristics (T_J=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} = 0V, I _D =-250μA	-60			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-60V, V _{GS} =0V			1	μA
Gate-Body Leakage Current	I _{GSS}	V _{GS} = ±20V, V _{DS} =0V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D =-250μA	-0.9	-1.4	-2.0	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} = -10V, I _D =-0.15 A		3.3	8	Ω
		V _{GS} =-4.5V, I _D =-0.15 A		3.5	9.9	
Diode Forward Voltage	V _{SD}	I _S =-0.17 A, V _{GS} =0V			-1.2	V
Maximum Body-Diode Continuous Current	I _S				-0.17	A
Dynamic Parameters						
Input Capacitance	C _{iss}	V _{DS} =-30V, V _{GS} =0V, f=1MHZ		43		pF
Output Capacitance	C _{oss}			2.9		
Reverse Transfer Capacitance	C _{rss}			1.8		
Switching Parameters						
Total Gate Charge	Q _g	V _{GS} =-10V, V _{DS} =-30V, I _D =-0.15A		1.77		nC
Gate-Source Charge	Q _{gs}			0.57		
Gate-Drain Charge	Q _{gd}			0.18		
Reverse Recovery Charge	Q _{rr}	IF=-0.15A, di/dt=100A/μs		13		ns
Reverse Recovery Time	t _{rr}			23		
Turn-on Delay Time	t _{D(on)}	V _{GS} =-4.5V, V _{DD} =-30V, I _D =-0.15A, R _{GEN} =2.5Ω		8.6		ns
Turn-on Rise Time	t _r			20		
Turn-off Delay Time	t _{D(off)}			15		
Turn-off fall Time	t _f			77		

A. Pulse Test: Pulse Width ≤ 10μs, Duty cycle ≤ 2%.

B. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.

• Typical Performance Characteristics

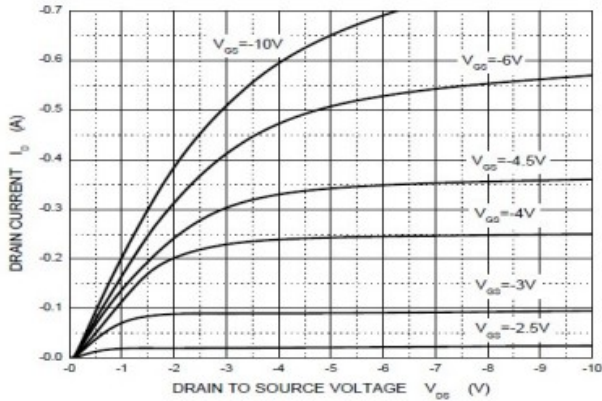


Figure1. Output Characteristics

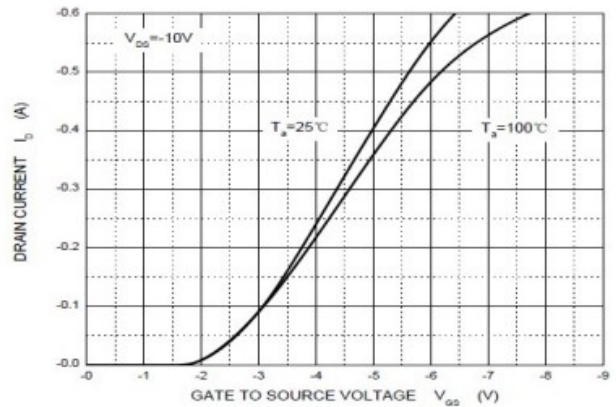


Figure2. Transfer Characteristics

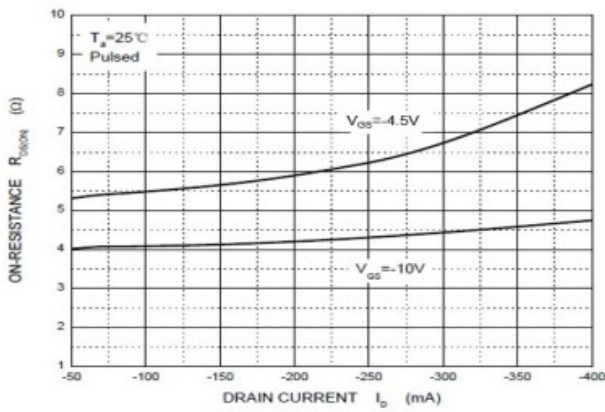


Figure3. Drain-Source on Resistance

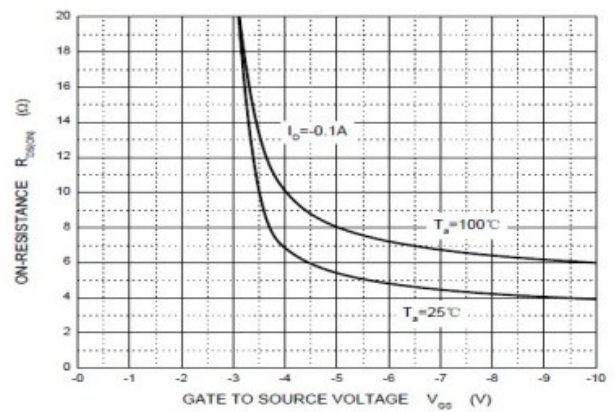


Figure4. Drain-Source on Resistance

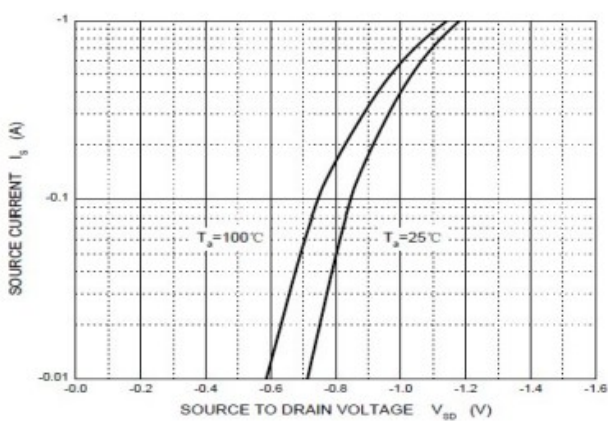


Figure5. Diode Forward Voltage vs. current

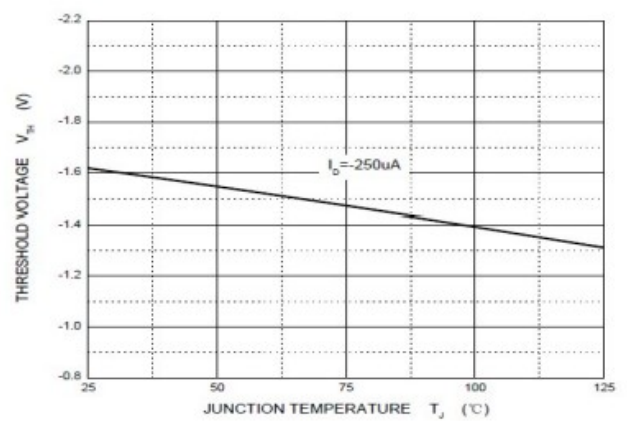
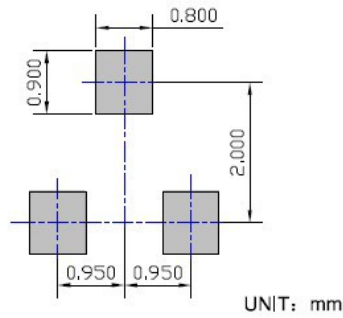
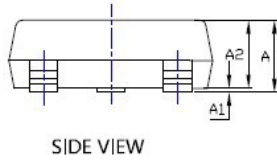
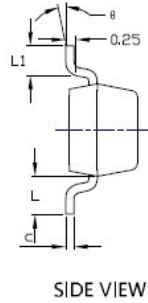
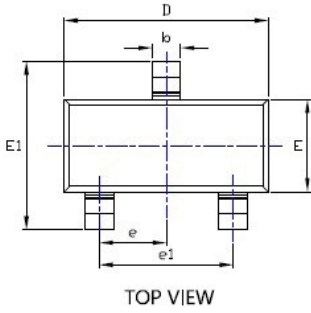


Figure6. Gate Threshold vs. Junction Temperature

▪ SOT-23 Package information



UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

SYMBOL	DIMENSIONS					
	INCHES			MILLimeter		
	MIN.	NDM.	MAX.	MIN.	NDM.	MAX.
A	0.035	---	0.045	0.900	---	1.150
A1	0.000	---	0.004	0.000	---	0.100
A2	0.035	0.038	0.041	0.900	0.975	1.050
b	0.012	0.016	0.020	0.300	0.400	0.500
c	0.004	---	0.008	0.100	---	0.200
D	0.110	0.114	0.118	2.800	2.900	3.000
E	0.047	0.051	0.055	1.200	1.300	1.400
E1	0.089	0.094	0.100	2.250	2.400	2.550
e	0.037 TYP			0.950 TYP		
e1	0.071	0.075	0.079	1.800	1.900	2.000
L	0.022 REF			0.550 REF		
L1	0.012	0.016	0.200	0.300	0.400	0.500
θ	0°	---	8°	0°	---	8°

NOTE:

1. PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
2. TOLERANCE 0,1mm UNLESS OTHERWISE SPECIFIED.
3. THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

ELV X X X R X P X

公司代号

低压MOS产品

漏源电压值，采用2位数字；
例如：04代表40V，10代表100V

封装外形标识，例如：O：SOT-23

沟道极性标识：N代表N型，P代表P型

导通电阻：R65代表0.65毫欧；6R5代表6.5毫欧；
100代表10毫欧，101代表100毫欧