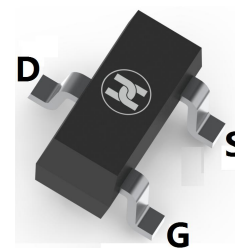
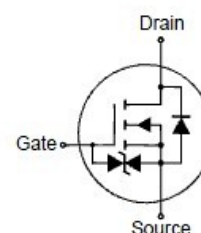


MOSFET (N-CHANNEL)
FEATURES

- Low on resistance $R_{DS(ON)}$
- Low gate threshold voltage
- Low input capacitance
- ESD protected up to 2KV


SOT-23

MECHANICAL DATA

- Case: SOT-23
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.008 grams (approximate)

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

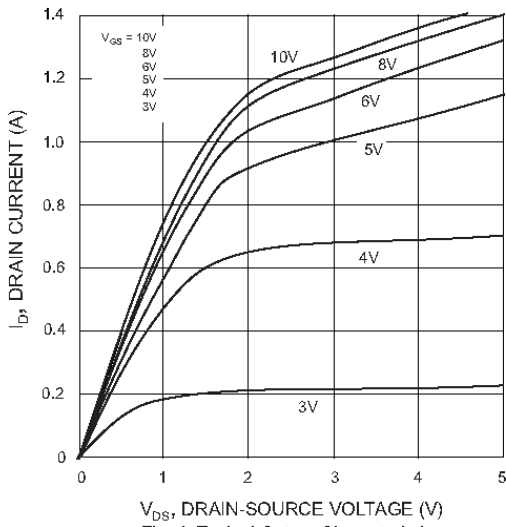
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	60	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current (Continuous)	I_D	300	mA
Drain Current (Pulse Width $\leq 10 \mu\text{s}$)	I_{DM}	800	mA
Total Power Dissipation	P_{tot}	350	mW
Operating and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T = 25^\circ\text{C}$ unless otherwise specified)

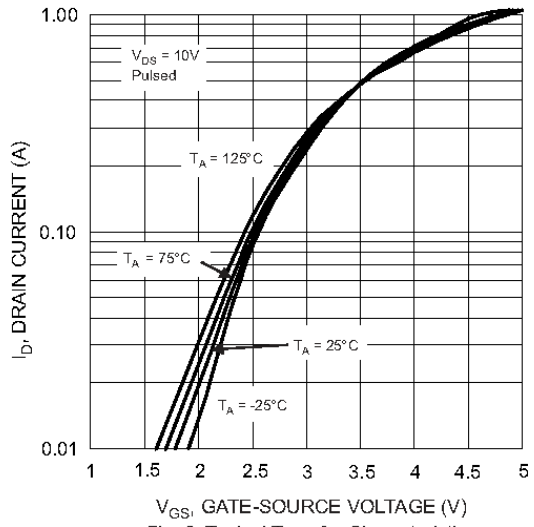
Parameter	Symbol	Min.	Max.	Unit
Drain Source Breakdown Voltage at $I_D = 10 \mu\text{A}$	BV_{DSS}	60	-	V
Zero Gate Voltage Drain Current at $V_{DS} = 60 \text{ V}$	I_{DSS}	-	1	μA
Gate Source Leakage Current at $V_{GS} = \pm 20 \text{ V}$	I_{GSS}	-	± 10	μA
Gate Threshold Voltage at $V_{DS} = 10 \text{ V}, I_D = 250 \mu\text{A}$	$V_{GS(th)}$	1	2.5	V
Static Drain Source On-Resistance at $V_{GS} = 10 \text{ V}, I_D = 500 \text{ mA}$ at $V_{GS} = 4.5 \text{ V}, I_D = 200 \text{ mA}$	$R_{DS(ON)}$	- -	3 4	Ω
Forward Transconductance at $V_{DS} = 10 \text{ V}, I_D = 200 \text{ mA}$	g_{fs}	80	-	mS
Input Capacitance at $V_{DS} = 25 \text{ V}, f = 1 \text{ MHz}$	C_{iss}	-	50	pF
Output Capacitance at $V_{DS} = 25 \text{ V}, f = 1 \text{ MHz}$	C_{oss}	-	25	pF
Reverse Transfer Capacitance at $V_{DS} = 25 \text{ V}, f = 1 \text{ MHz}$	C_{rss}	-	5	pF

MOSFET (N-CHANNEL)

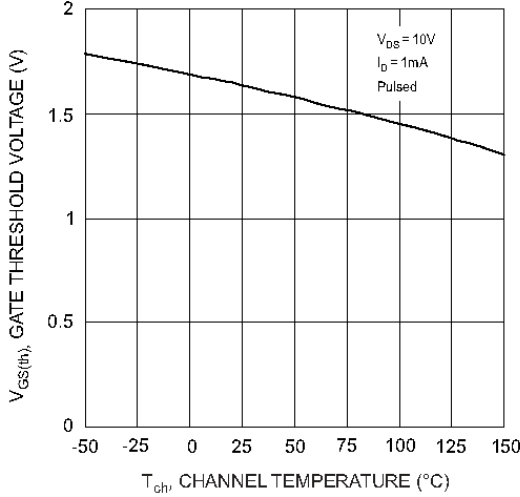
Typical Characteristics



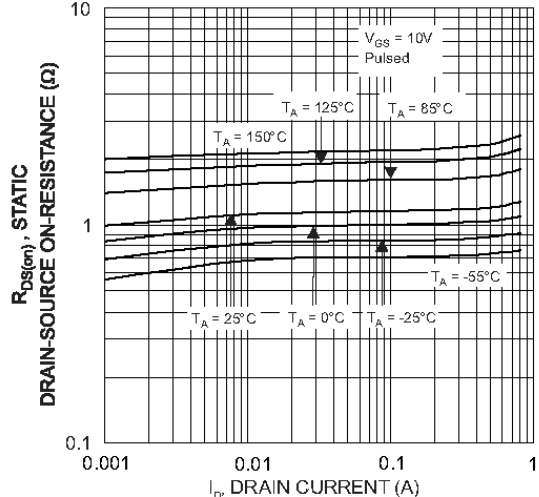
V_{DS} , DRAIN-SOURCE VOLTAGE (V)
Fig. 1 Typical Output Characteristics



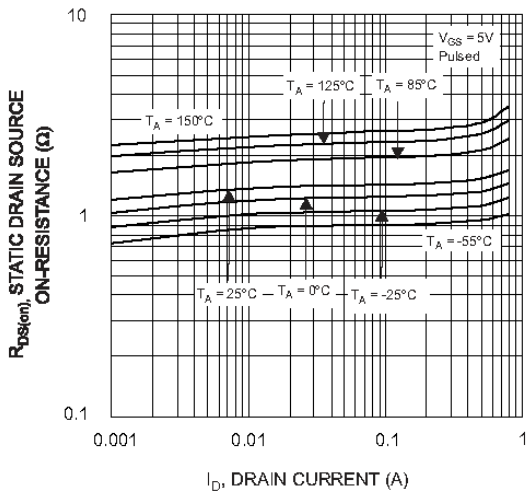
V_{GS} , GATE-SOURCE VOLTAGE (V)
Fig. 2 Typical Transfer Characteristics



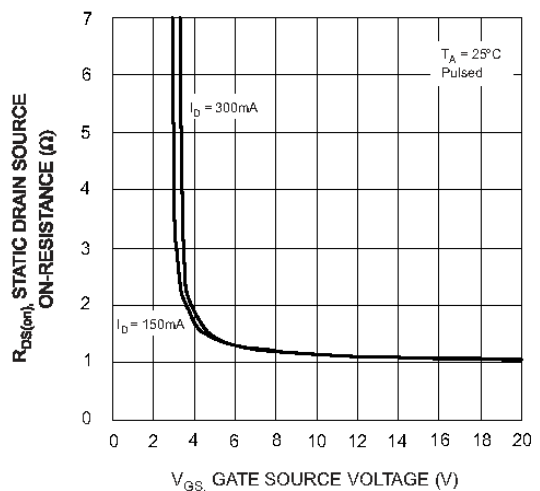
T_{ch} , CHANNEL TEMPERATURE ($^\circ C$)
Fig. 3 Gate Threshold Voltage vs. Channel Temperature



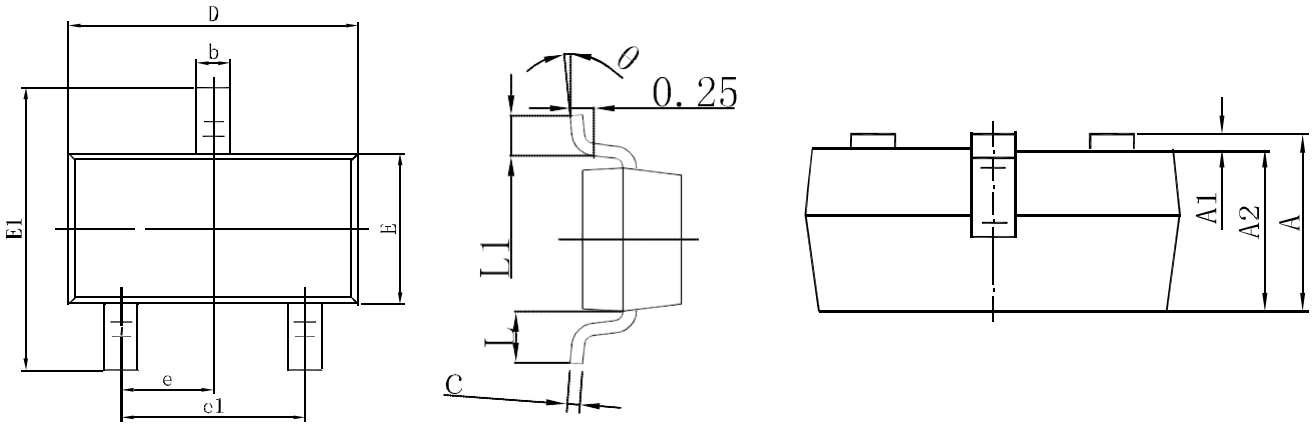
$R_{DS(on)}$, STATIC DRAIN-SOURCE ON-RESISTANCE (Ω)
 I_D , DRAIN CURRENT (A)
Fig. 4 Static Drain-Source On-Resistance vs. Drain Current



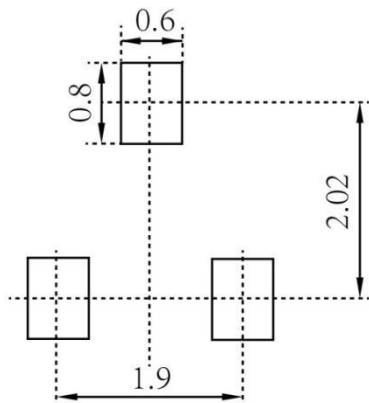
I_D , DRAIN CURRENT (A)
Fig. 5 Static Drain-Source On-Resistance vs. Drain Current



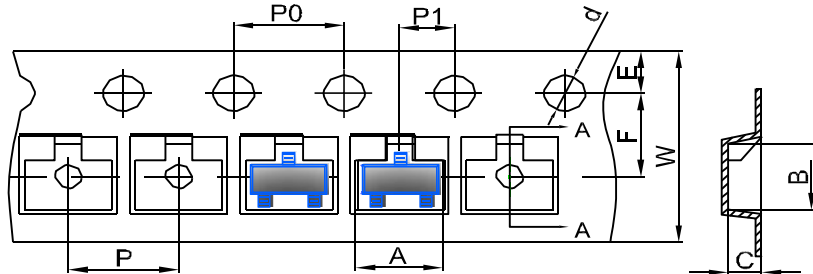
V_{GS} , GATE SOURCE VOLTAGE (V)
Fig. 6 Static Drain-Source On-Resistance vs. Gate-Source Voltage

MOSFET (N-CHANNEL)
SOT-23 Package Outline Dimensions


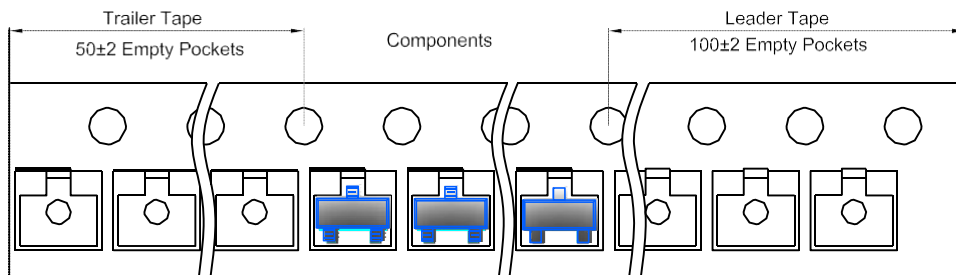
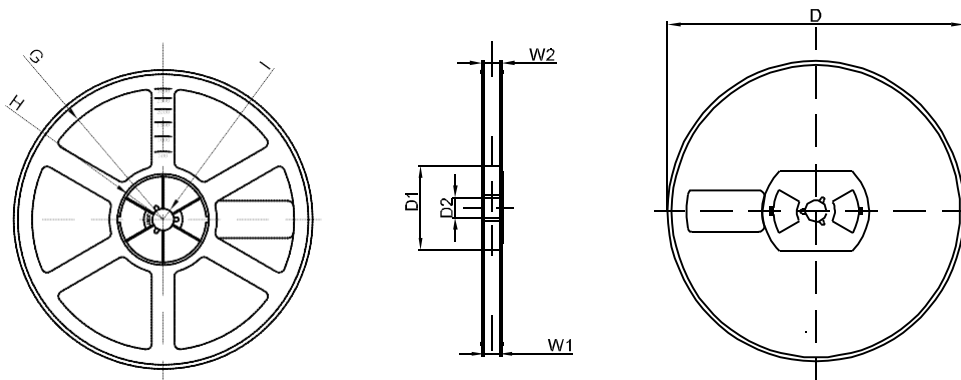
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout

Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

MOSFET (N-CHANNEL)
SOT-23 Tape and Reel
SOT-23 Embossed Carrier Tape


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SOT-23 Tape Leader and Trailer

SOT-23 Reel


DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	9.50	12.30
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1