

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
60V	5Ω@10V	340mA
	5.3Ω@4.5V	

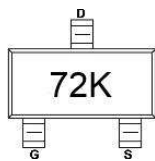
Feature

- High density cell design for Low $R_{DS(on)}$
- Voltage controlled small signal switch
- Rugged and reliable
- ESD protected Gate HBM 2.5KV

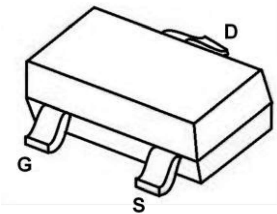
Application

- DC/DC Converter
- Load Switch for Portable Devices
- Battery Switch

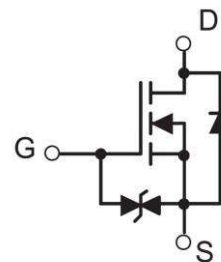
MARKING:



SOT-23



Schematic diagram



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	340	mA
Power Dissipation	P_D	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

MOSFET ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

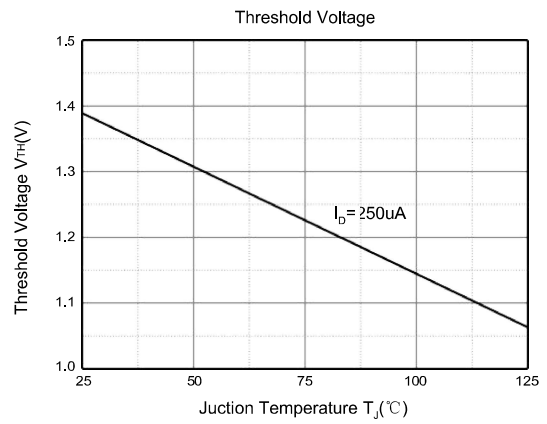
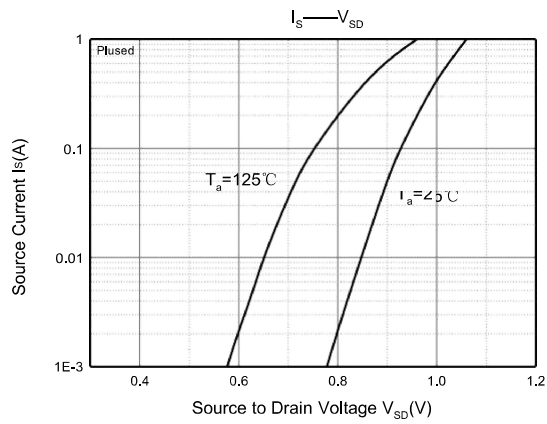
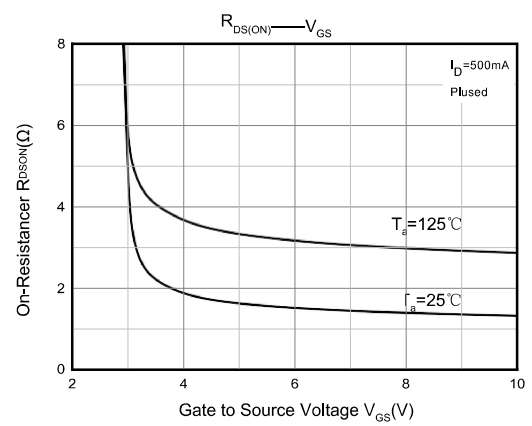
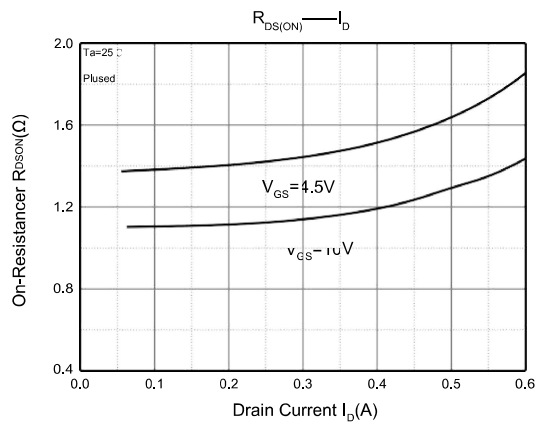
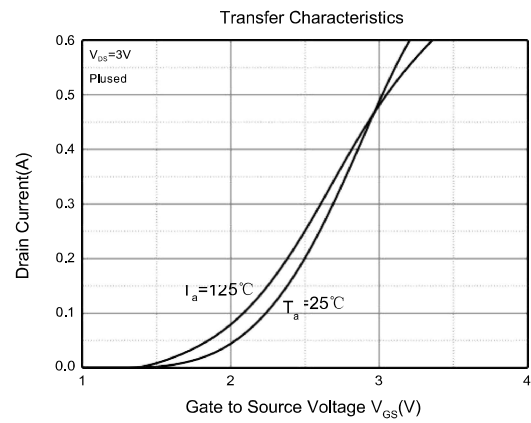
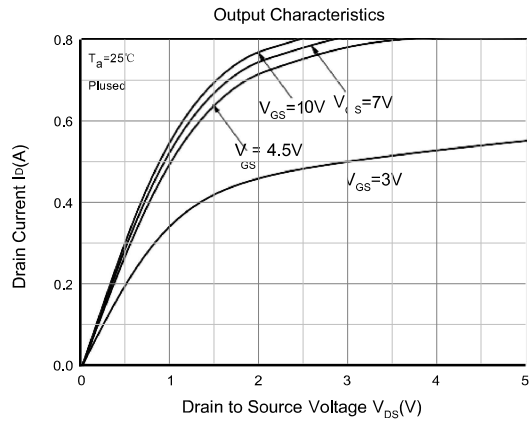
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	60			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =48V,V _{GS} = 0V			1	uA
Gate-body leakage current	I _{GSS1}	V _{GS} =±20V, V _{DS} = 0V			±10	μA
	I _{GSS2}	V _{GS} =±10V, V _{DS} = 0V			±200	nA
	I _{GSS2}	V _{GS} =±5V, V _{DS} = 0V			±100	nA
Gate threshold voltage*	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	1	1.4	2.5	V
Drain-source on-resistance*	R _{DS(on)}	V _{GS} =10V, I _D =500mA		1.3	5	Ω
		V _{GS} =4.5V, I _D =200mA		1.4	5.3	
Recovered charge	Q _r	V _{GS} =0V,I _S =300mA,V _R =25V, dI _S /d _t =-100A/μS		30		nC
Dynamic characteristics**						
Input Capacitance	C _{iss}	V _{DS} =10V,V _{GS} =0V,f=1MHz			40	pF
Output Capacitance	C _{oss}				30	
Reverse Transfer Capacitance	C _{rss}				10	
Switching Characteristics**						
Turn-on delay time	t _{d(on)}	V _{GS} =10 V, V _{DD} =50V, R _G =50Ω			10	ns
Turn-off delay time	t _{d(off)}	R _{GS} =50Ω,R _L =250Ω			15	
Reverse recovery Time	t _{rr}	V _{GS} =0V,I _S =300mA,V _R =25V, dI _S /d _t =-100A/μS		30		
Source-Drain Diode characteristics						
Diode Forward voltage	V _{SD}	V _{GS} =0V, I _S =300mA		0.97	1.5	V
GATE-SOURCE ZENER DIODE						
Gate-Source Breakdown Voltage	BV _{GSO}	IGS=±1mA(Open Drain)	±21.5		±30	V

Notes:

*Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

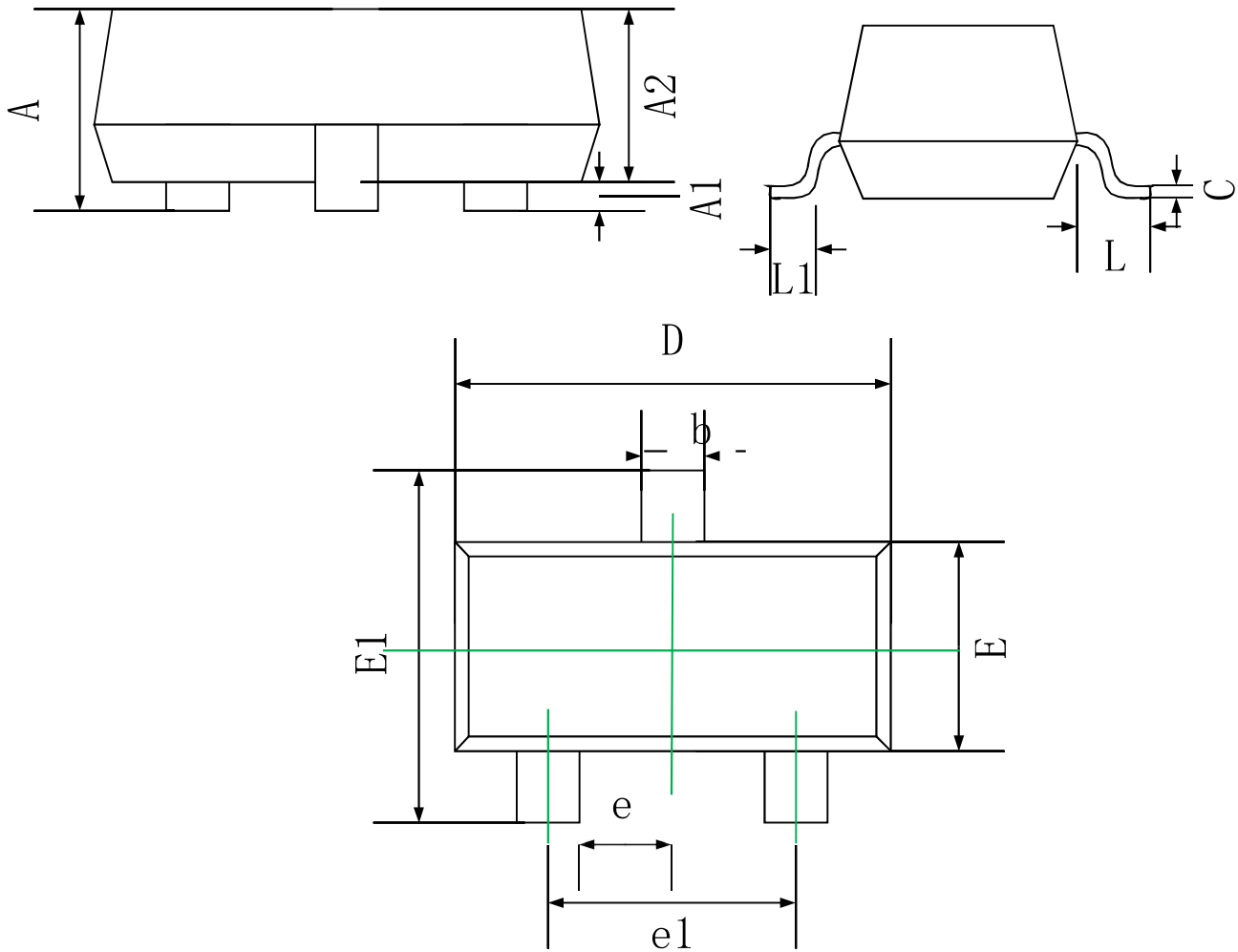
**These parameters have no way to verify.

Typical Characteristics





SOT-23 Package Information

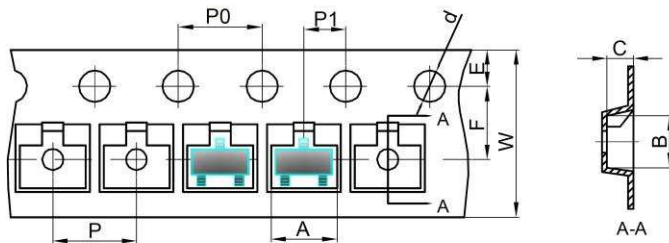


Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
A2	0.90	1.05
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	1.20	1.40
E1	2.25	2.55
e	0.95 REF.	
e1	1.80	2.00
L	0.55 REF.	
L1	0.30	0.50

SOT-23 Tape and Reel

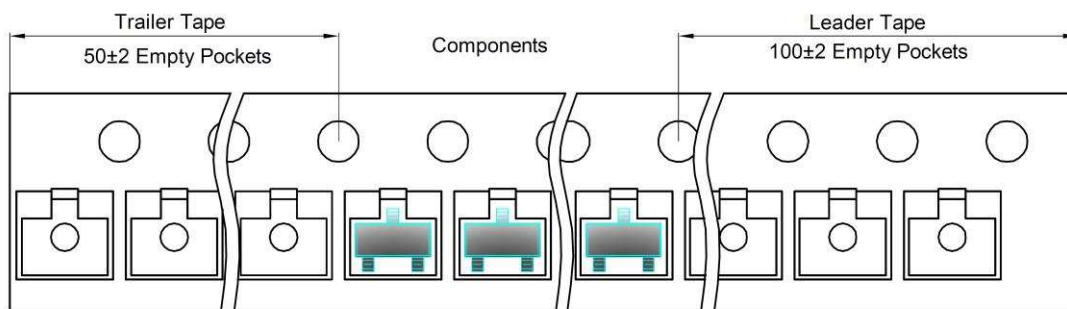
SOT-23 Tape and reel

SOT-23 Embossed Carrier Tape

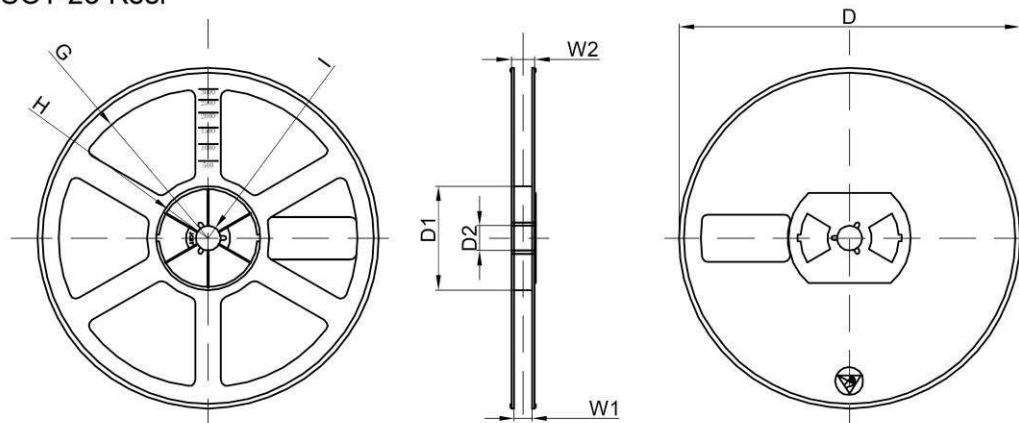


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

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	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	