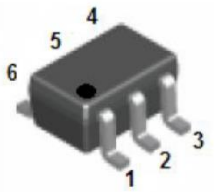
60V Dual N-Channel Power MOSFET

DESCRIPTION：

V_{DSS}	60V
I_D	340mA
$R_{DS(ON)_MAX.}$ @V_{GS}=10V	5Ω

·Epoxy meets UL 94 V-0 flammability rating
·High density cell design for Low RDS(ON)
·Voltage controlled small signal switch
·High Saturation Current Capability
·ESD protected



SOT-363

MAXIMUM RATINGS (at T_C = 25 °C, unless otherwise specified)

Characteristic	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	340	mA
Total Power Dissipation	P_D	150	mW
Storage Temperature Range	T_{STG}	-55~+150	℃
Operating Junction Temperature Range	T_J	150	℃
Junction to Ambient	$R_{\theta JA}$	820	℃/W

ELECTRICAL CHARATERISTICS (at T_J = 25 °C, unless otherwise specified)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage VGS = 0V, ID = 250uA	$V_{(BR)DSS}$	60			V
Gate-Source threshold voltage VDS = VGS, ID = 1mA	$V_{GS(th)}$	1.0		2.5	V
Gate-Source Leakage Current VGS = ±20V, VDS = 0V	I_{GSS}			±10	uA
Zero Gate Voltage Drain Current VDS = 48 V, VGS = 0 V,	I_{DSS}			1.0	uA
Drain-Source On-State Resistance VGS = 4.5V, ID = 200mA VGS = 10V, ID = 500mA	$R_{DS(on)}$			5.3 5.0	Ω
Body Diode Forward Voltage VGS = 0V, IS = 300mA	V_{SD}			1.5	V
Revers Recovery Charge I_S=300mA, VR=25V, VGS=0V, di/dt = 100A/us	Qr		30		nC
Input capacitance f=1MHz, VDS=25 V, VGS=0 V	C_{iss}			40	pF
Output capacitance f=1MHz, VDS=25 V, VGS=0 V	C_{oss}			30	pF
Reverse transfer capacitance f=1MHz, VDS=25 V, VGS=0 V	C_{rss}			10	pF
Turn-on delay time VDS= 25V, VGEN= 10V, ID=500mA, RL=50Ω,RG=25Ω	td (ON)			10	ns
Turn-off delay time VDS= 25V, VGEN= 10V, ID=500mA, RL=50Ω,RG=25Ω	td (OFF)			15	ns
Revers Recovery Time VGS=0V,IS=300mA, VR=25V,dls/dt=-100A/us	Trr		30		ns
Gate-Source Breakdown Voltage Igs=±1mA (Open Drain)	BV_{GSO}	±21.5		±30	V

Typical Performance Characteristics

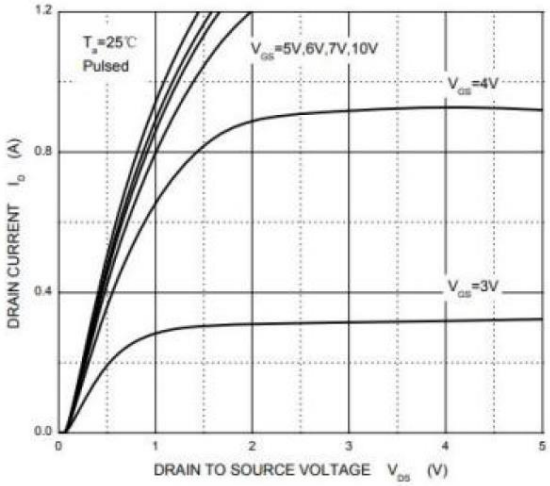


Figure 1. Output Characteristics

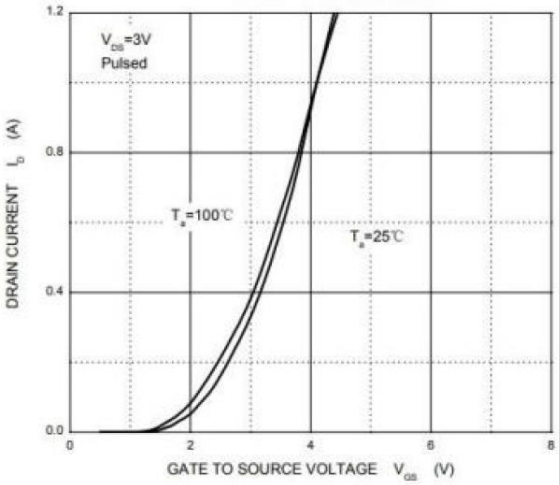


Figure 2. Transfer Characteristics

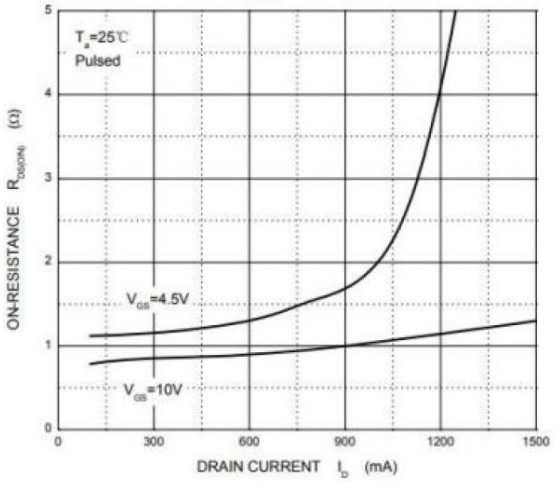


Figure 3. $R_{DS(ON)}$ vs. I_D

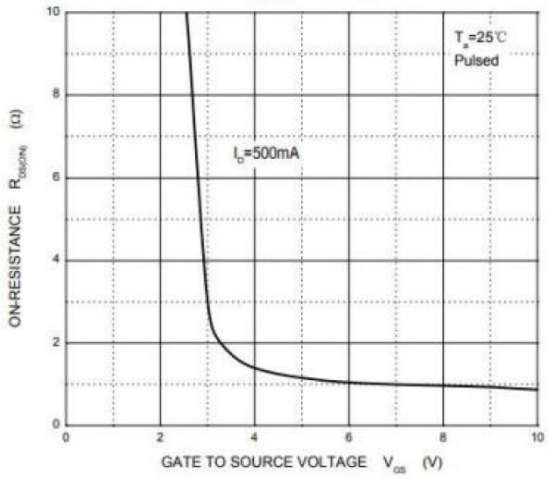


Figure 4. $R_{DS(ON)}$ vs. V_{GS}

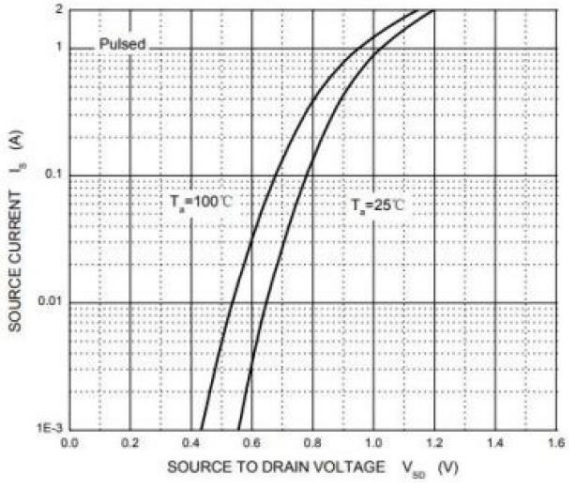


Figure 5. I_S vs. V_{SD}

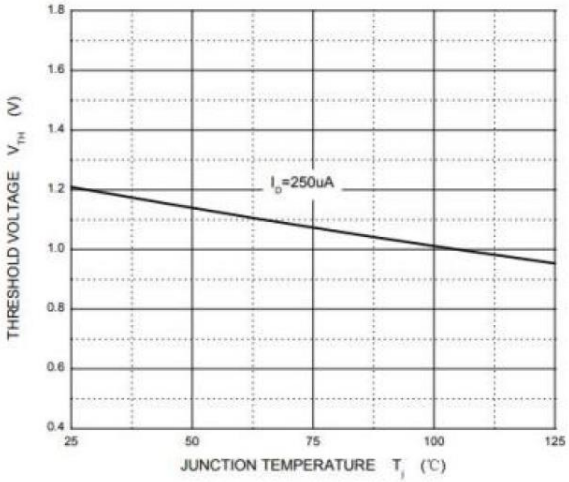
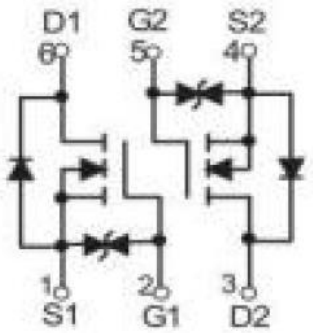
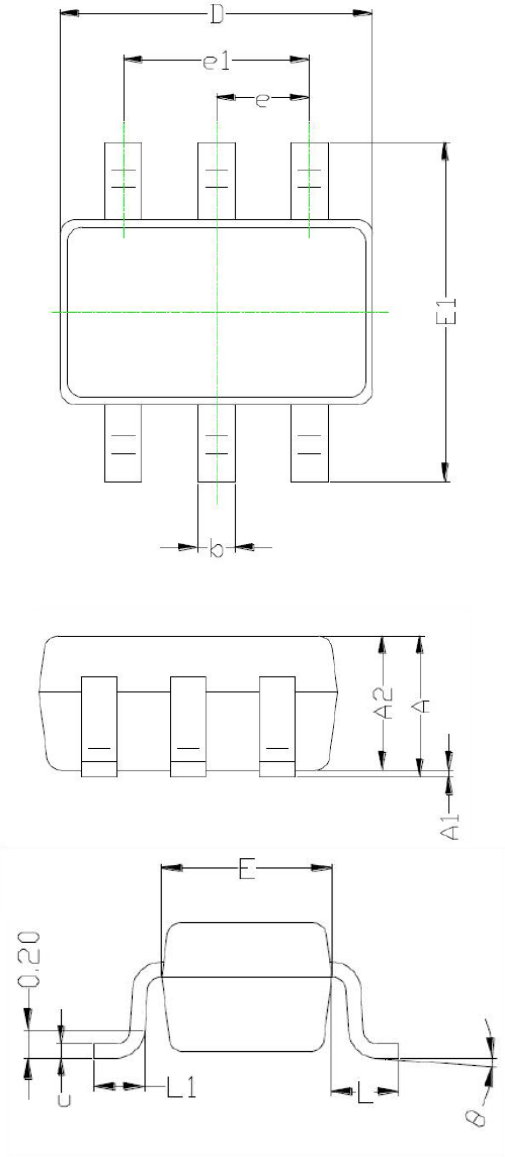


Figure 6. Threshold Voltage

·Circuit diagram



·Package outlines : Dimensions in (mm)



Symbol	Min.	Max.
A	0.90	1.10
A1	0	0.10
A2	0.90	1.00
b	0.15	0.35
c	0.10	0.15
D	2.00	2.20
E	1.15	1.35
E1	2.15	2.40
e	0.65 typ.	
e1	1.20	1.40
L	0.525 ref.	
L1	0.26	0.46
θ	0°	8°

Notice

MOSPEC reserves the rights to make changes of the content herein the document anytime without notification. MOSPEC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies. Please refer to MOSPEC website for the last document.

MOSPEC disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially incurred.

Application shown on the herein document are examples of standard use and operation. Customers are responsible for comprehending suitable use in particular applications. MOSPEC makes no representation or warranty that such application will be suitable for the specified use without further testing or modification.

The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by MOSPEC for any infringements of patents or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of MOSPEC or others.

These MOSPEC products are intended for usage in general electronic equipment. Please make sure to consult with MOSPEC before you use these MOSPEC products in equipment which require specialized quality and/or reliability, and in equipment which could have major impact to the welfare of human life (atomic energy control, aeronautics , traffic control, combustion control, safety devices etc.)