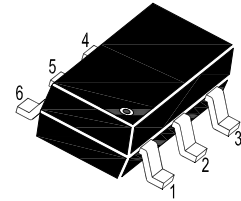


■ Features

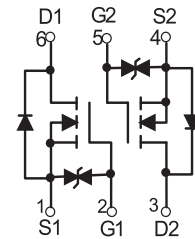
- High density cell design for Low  $R_{DS(on)}$
- Voltage controlled small signal switch
- Rugged and reliable
- High saturation current capability
- ESD protected

■ Applications

- Load Switch for Portable Devices
- DC/DC Converter



■ Simplified outline (SOT-363)



$V_{(BR)DSS}$	$R_{DS(on)MAX}$	$I_D$
60V	2.5Ω@10V	340mA
	3Ω@4.5V	

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$

Symbol	Parameter	Value	Unit
$V_{DS}$	Drain-Source voltage	60	V
$V_{GS}$	Gate-Source voltage	±20	V
$I_D$	Drain Current	340	mA
$P_D$	Power Dissipation	0.15	W
$T_J$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature	-55-150	°C
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	833	°C /W

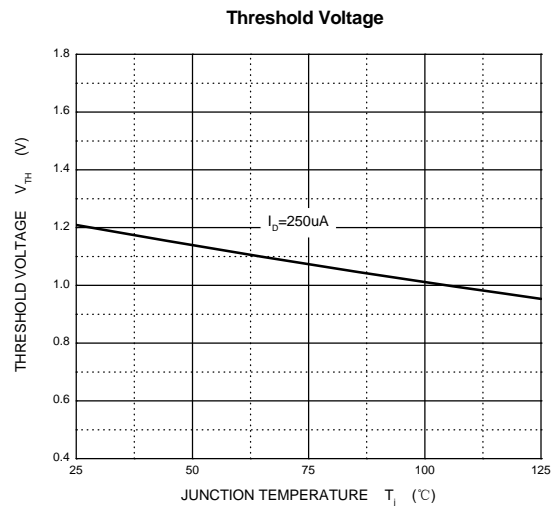
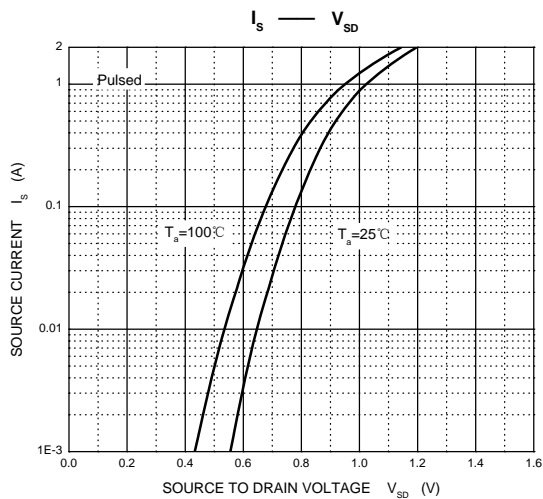
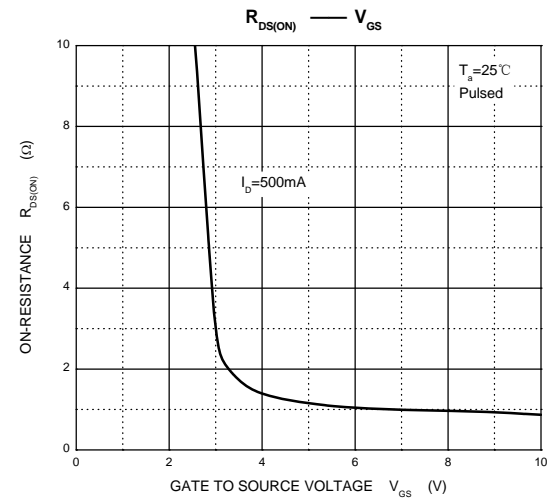
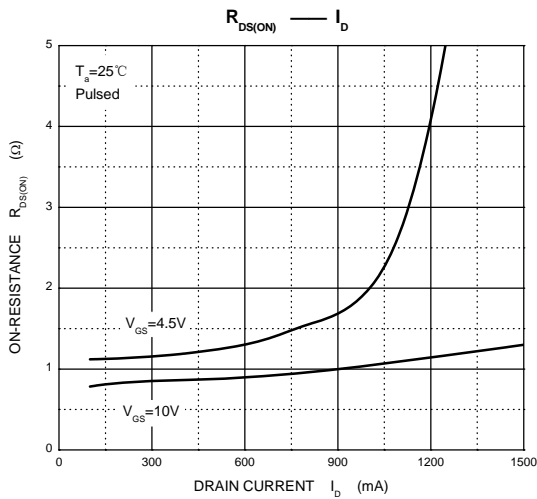
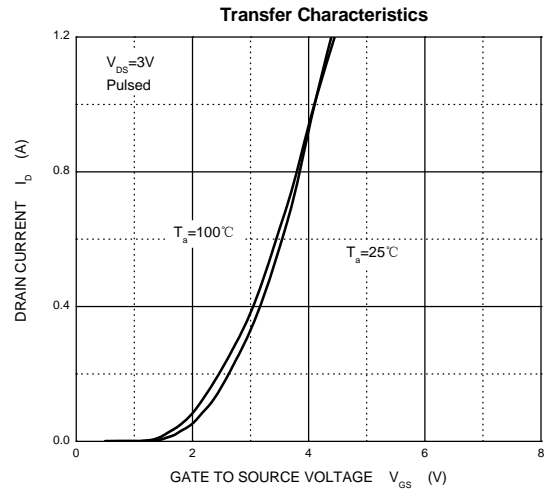
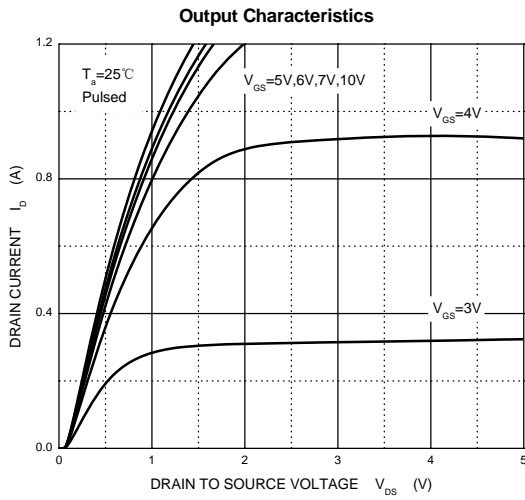
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
<b>Static Characteristics</b>						
Drain-Source Breakdown Voltage	V <sub>DS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> = 250μA	60			V
Gate Threshold Voltage*	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = 1mA	1	1.3	2.5	V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = 48V, V <sub>GS</sub> = 0V			1	μA
Gate –Source leakage current	I <sub>GSS1</sub>	V <sub>GS</sub> = ±20V, V <sub>DS</sub> = 0V			±10	μA
Drain-Source On-Resistance*	R <sub>DS(on)</sub>	V <sub>GS</sub> = 4.5V, I <sub>D</sub> = 200mA		1.1	3	Ω
		V <sub>GS</sub> = 10V, I <sub>D</sub> = 500mA		0.9	2.5	Ω
Diode Forward Voltage	V <sub>SD</sub>	V <sub>GS</sub> = 0V, I <sub>S</sub> = 300mA			1.5	V
Recovered charge	Q <sub>r</sub>	V <sub>GS</sub> = 0V, I <sub>S</sub> = 300mA, V <sub>R</sub> = 25V, di/dt = -100A/μs		30		nC
<b>Dynamic Characteristics**</b>						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 10V, V <sub>GS</sub> = 0V, f = 1MHz			40	pF
Output Capacitance	C <sub>oss</sub>				30	pF
Reverse Transfer Capacitance	C <sub>rss</sub>				10	pF
<b>Switching Characteristics**</b>						
Turn-On Delay Time	t <sub>d(on)</sub>	V <sub>GS</sub> = 10V, V <sub>DD</sub> = 50V, R <sub>G</sub> = 50Ω, R <sub>GS</sub> = 50Ω, R <sub>L</sub> = 250Ω			10	ns
Turn-Off Delay Time	t <sub>d(off)</sub>				15	ns
Reverse recovery Time	t <sub>rr</sub>	V <sub>GS</sub> = 0V, I <sub>S</sub> = 300mA, V <sub>R</sub> = 25V, di/dt = -100A/μs		30		ns
<b>GATE-SOURCE ZENER DIODE</b>						
Gate-Source Breakdown Voltage	BV <sub>GSO</sub>	I <sub>GS</sub> = ±1mA (Open Drain)	±21.5		±30	V

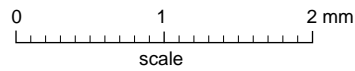
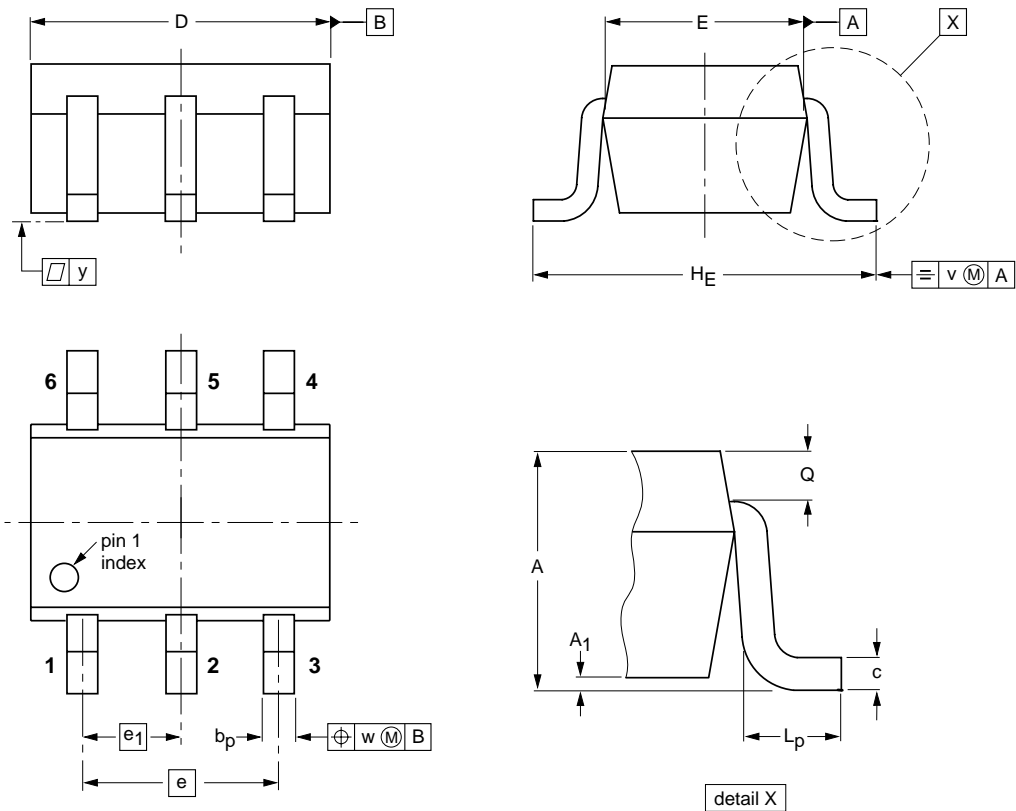
**Notes :**

\*Pulse Test : Pulse Width ≤300μs, Duty Cycle ≤2%.

\*\*These parameters have no way to verify.



■ SOT-363



**DIMENSIONS (mm are the original dimensions)**

UNIT	A	A <sub>1</sub> max	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	Q	v	w	y
mm	1.1 0.8	0.1	0.30 0.20	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.25 0.15	0.2	0.2	0.1