

N-Channel Enhancement Mode MOSFET

- **Features**

VDS	VGS	RDSon TYP	ID
100V	±20V	150mR@10V	6A
		220mR@4V5	

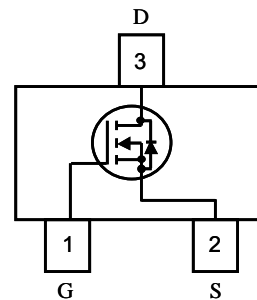
- **General Description**

This device uses advanced trench technology to provide excellent RDS(ON) and low gate charge. This device is suitable for use as a load switch or in PWM applications.

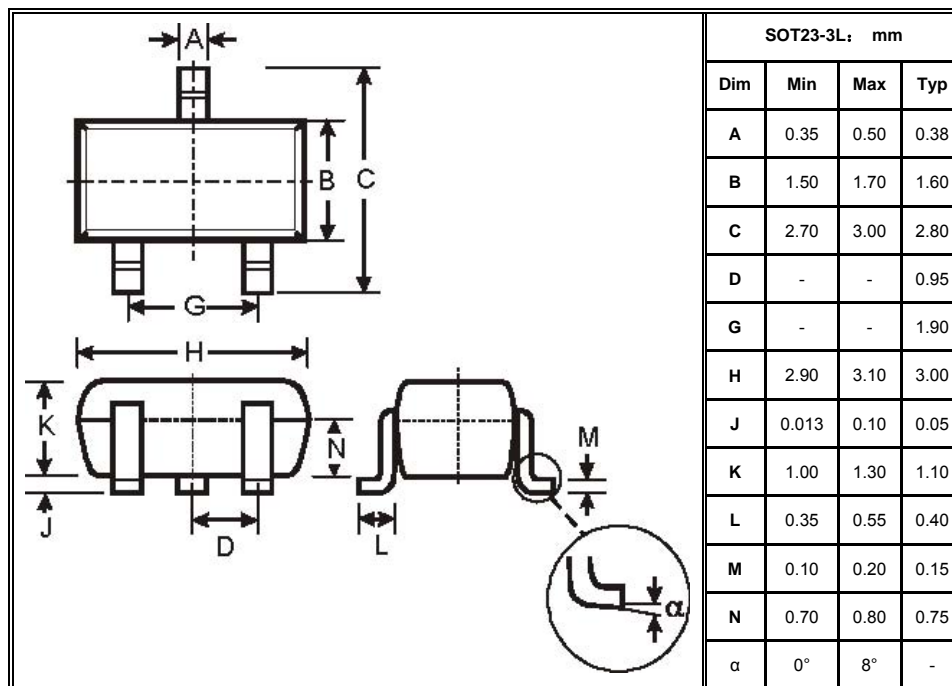
- **Applications**

- Load Switch
- Portable Devices
- DCDC conversion

- **Pin Configuration**



- **Package Information**



● **Absolute Maximum Ratings** @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	N-channel	Unit
Drain-Source Voltage	V_{DSS}	100	V
Gate-Source Voltage	V_{GSS}	± 20	V
Continuous Drain Current (Note 1)	I_D	2.3	A
Plused Drain Current (Note 2)	I_{DM}	6	A
Total Power Dissipation (Note 1)	P_D	1	W
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

● **Electrical Characteristics** @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{ V}, I_D = 250\mu\text{A}$	100	--	--	V
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	1	--	3	V
Gate-Body Leakage Current	I_{GSS}	$V_{GS} = \pm 20\text{ V}, V_{DS} = 0\text{ V}$	--	--	± 10	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 100\text{ V}, V_{GS} = 0\text{ V}$	--	--	1	μA
Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS} = 10\text{ V}, I_D = 1.5\text{ A}$	--	--	150	mR
		$V_{GS} = 4.5\text{ V}, I_D = 1\text{ A}$	--	--	220	
Diode Forward Voltage	V_{SD}	$V_{GS} = 0\text{ V}, I_S = 1\text{ A}$	--	--	1.5	V
Input Capacitance	C_{ISS}	$V_{DS} = 15\text{ V}, V_{GS} = 0\text{ V},$ $f = 1.0\text{ MHz}$	--	330	--	pF
Output Capacitance	C_{OSS}		--	42	--	
Reverse Transfer Capacitance	C_{RSS}		--	16	--	
Turn-On Delay Time	$T_{D(ON)}$	$V_{DS} = 50\text{ V}, R_L = 33\text{ R},$ $V_{GS} = 10\text{ V}, V_{GEN} = 10\text{ V}$	--	15	--	ns
Turn-Off Delay Tim	$T_{D(OFF)}$		--	30	--	

Note :

1. DUT is mounted on a 1in² FR-4 board with 2oz. Copper in a still air environment at 25 $^\circ\text{C}$, the current rating is based on the DC (continuous) test conditions.
2. Repetitive rating, pulse width limited by junction temperature.

● Typical Performance Characteristics

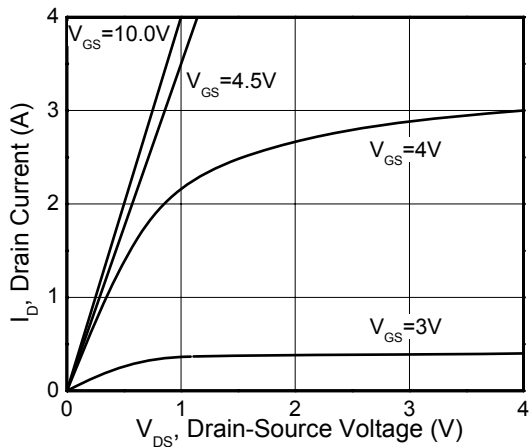


Fig1. Output Characteristics

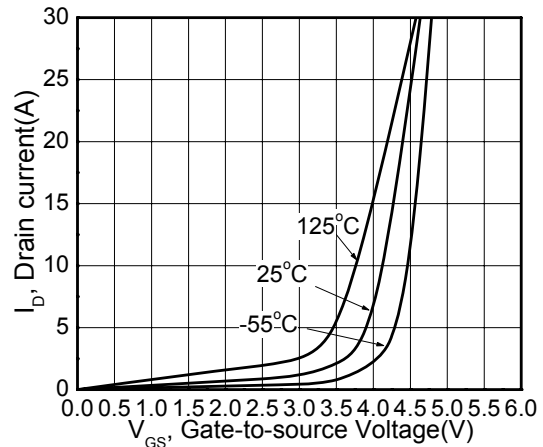


Fig2. Transfer Characteristics

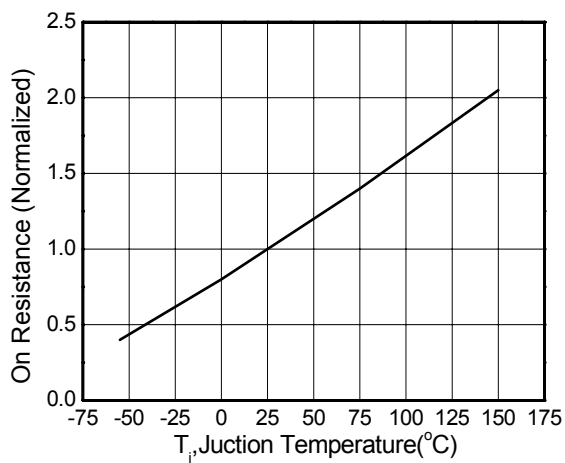


Fig3. On Resistance vs. Temperature

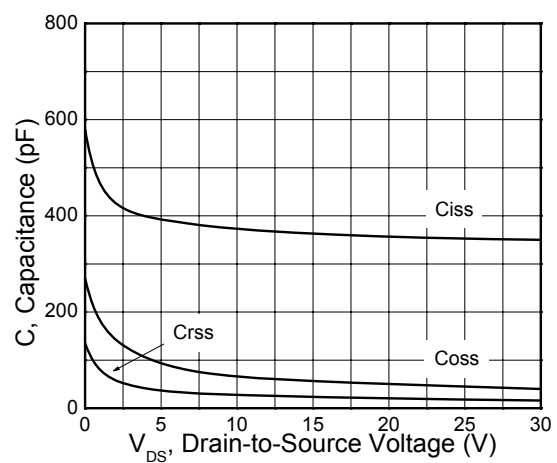


Fig4. Capacitance

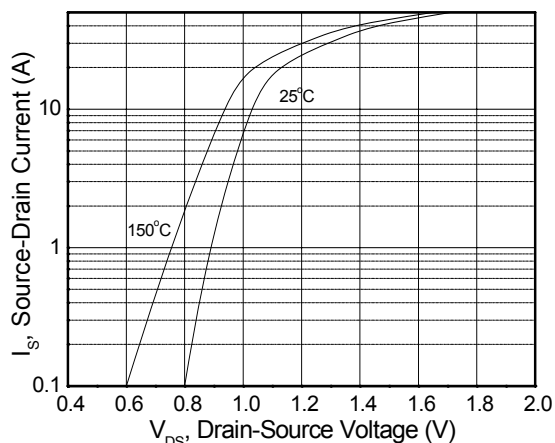


Fig5. Diode Forward Characteristics

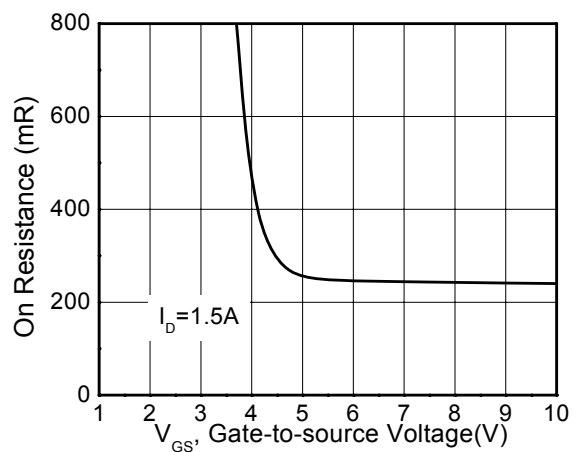


Fig6. Threshold Characteristics