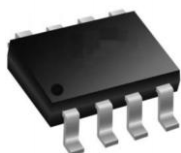


Features

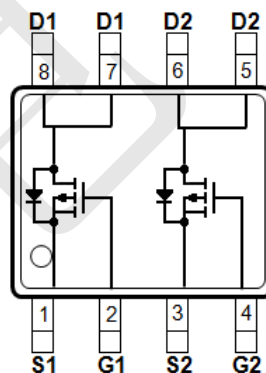
- $R_{DS(ON)}$, $V_{GS}@-10V, I_D@-7.8A < 27m\Omega$
- $R_{DS(ON)}$, $V_{GS}@-4.5V, I_D@-5A < 38m\Omega$
- High switching speed
- Improved dv/dt capability
- Low Gate Charge
- Low reverse transfer capacitance
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Green molding compound as per IEC61249 Std.. (Halogen Free)



SOP-8

Mechanical Data

- Case: SOP-8 package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0029 ounces, 0.083 grams



Maximum Ratings and Thermal Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
Drain-Source Voltage		V _{DS}	-30	V
Gate-Source Voltage		V _{GS}	±20	V
Continuous Drain Current	T _A =25°C	I _D	-7.8	A
	T _A =70°C		-6.3	
Pulsed Drain Current ^(Note 1)		I _{DM}	-31.2	
Power Dissipation	T _A =25°C	P _D	1.25	W
	T _A =70°C		0.8	
Operating Junction and Storage Temperature Range		T _J , T _{STG}	-55~150	°C
Typical Thermal Resistance		R _{θJA}	100	°C/W
- Junction to Ambient ^(Note 5)				

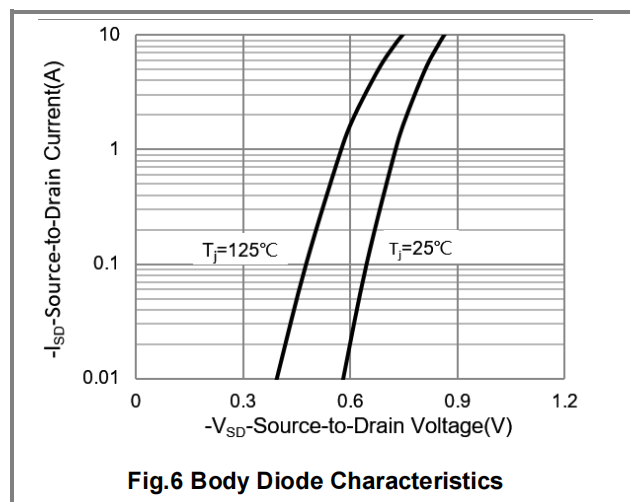
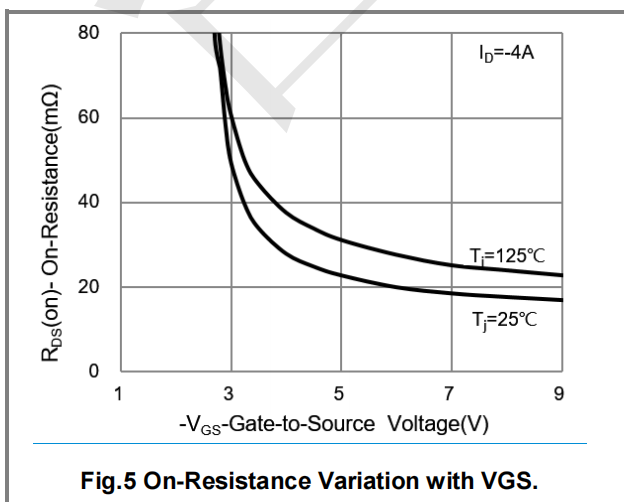
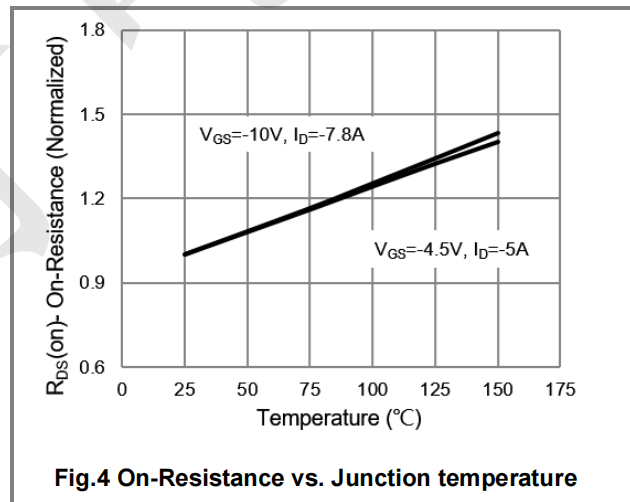
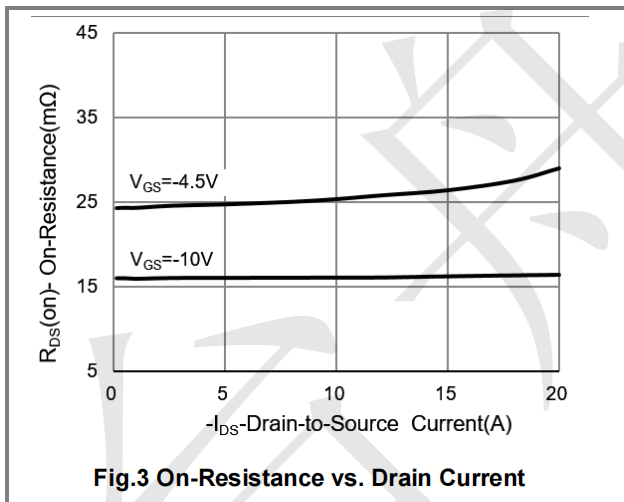
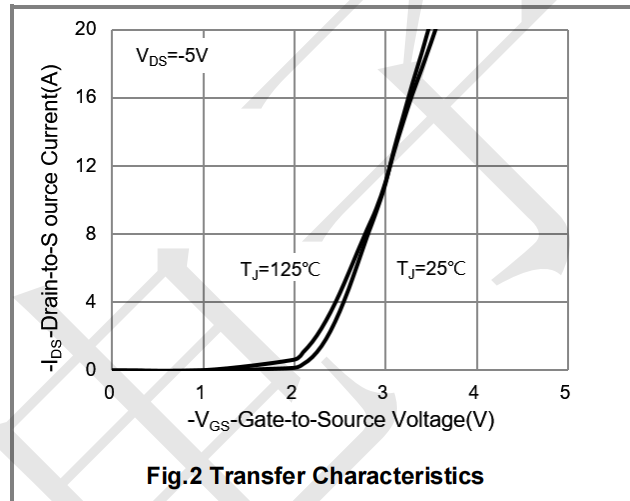
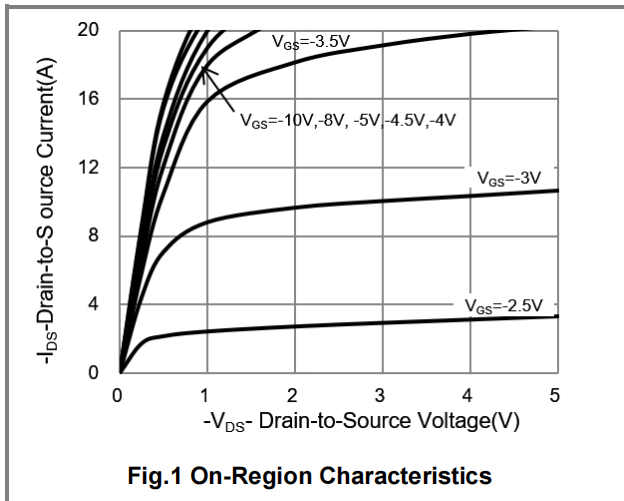
Electrical Characteristics (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Static						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V, I _D =-250uA	-30	-	-	V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250uA	-1.0	-1.5	-2.5	
Drain-Source On-State Resistance	R _{DS(on)}	V _{GS} =-10V, I _D =-7.8A	-	21	27	mΩ
Drain-Source On-State Resistance	R _{DS(on)}	V _{GS} =-4.5V, I _D =-5A	-	28	38	
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-30V, V _{GS} =0V	-	-	-1.0	uA
Gate-Source Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0V	-	-	±100	nA
Dynamic (Note 6)						
Total Gate Charge	Q _g	V _{DS} =-15V, I _D =-5A, V _{GS} =-4.5V (Note 1,2)	-	11	-	nC
Gate-Source Charge	Q _{gs}		-	3.2	-	
Gate-Drain Charge	Q _{gd}		-	3.9	-	
Input Capacitance	C _{iss}	V _{DS} =-15V, V _{GS} =0V, f=1.0MHZ	-	1169	-	pF
Output Capacitance	C _{oss}		-	180	-	
Reverse Transfer Capacitance	C _{rss}		-	132	-	
Turn-On Delay Time	t _{d(on)}	V _{DS} =-15V, I _D =-1A, V _{GS} =-10V, R _G =6Ω (Note 1,2)	-	5.9	-	ns
Turn-On Rise Time	t _r		-	33	-	
Turn-Off Delay Time	t _{d(off)}		-	55	-	
Turn-Off Fall Time	t _f		-	34	-	
Drain-Source Diode						
Maximum Continuous Drain-Source Diode Forward Current	I _S	---	-	-	-7.8	A
Diode Forward Voltage	V _{SD}	I _S =-1A, V _{GS} =0V	-	-0.7	-1.0	V

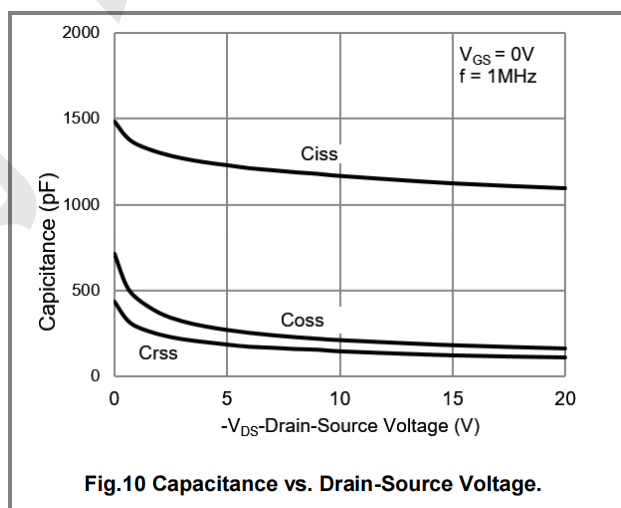
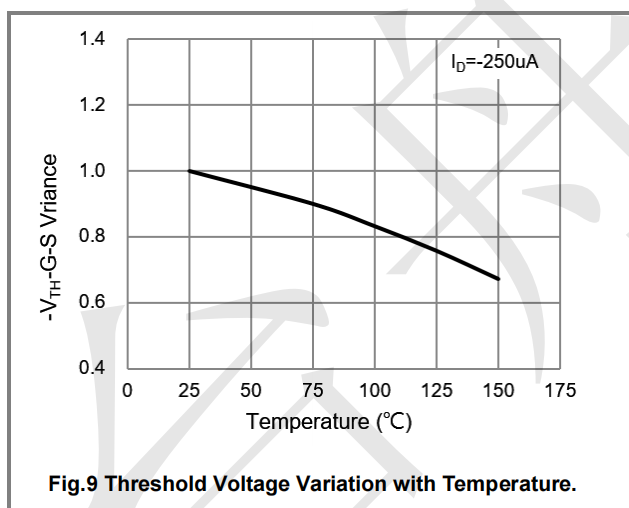
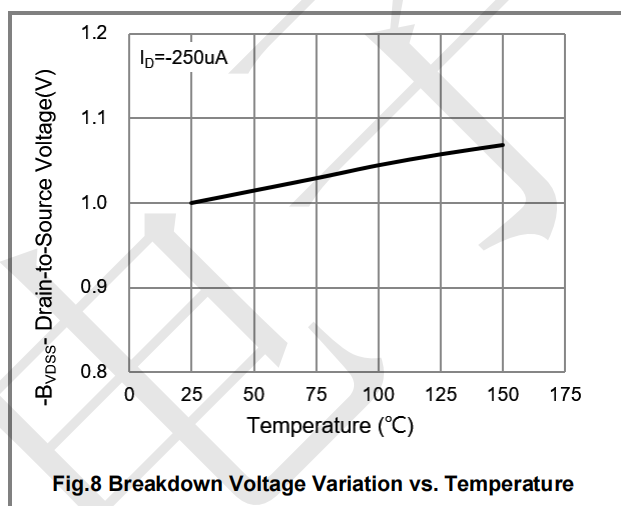
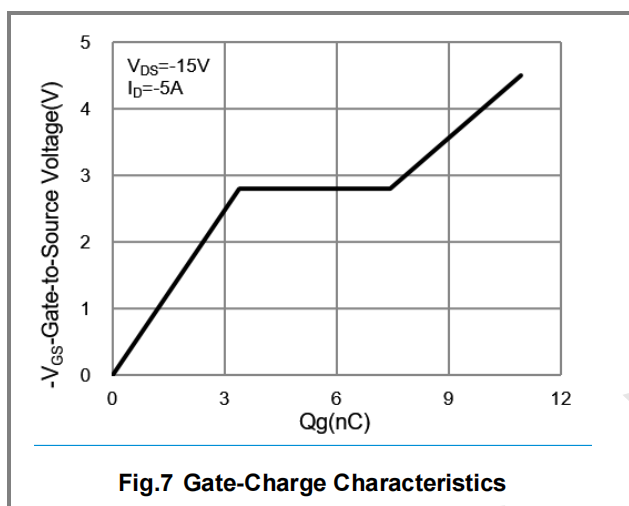
NOTES :

- Pulse width≤300us, Duty cycle≤2%
- Essentially independent of operating temperature typical characteristics.
- The maximum current rating is package limited.
- Repetitive rating, pulse width limited by junction temperature T_{J(MAX)}=150°C. Ratings are based on low frequency and duty cycles to keep initial T_J=25°C.
- R_{θJA} is the sum of the junction-to-case and case-to-ambient thermal resistance where the case thermal reference is defined as the solder mounting surface of the drain pins. Mounted on a 1 inch² with 2oz.square pad of copper.
- Guaranteed by design, not subject to production testing.

TYPICAL CHARACTERISTIC CURVES

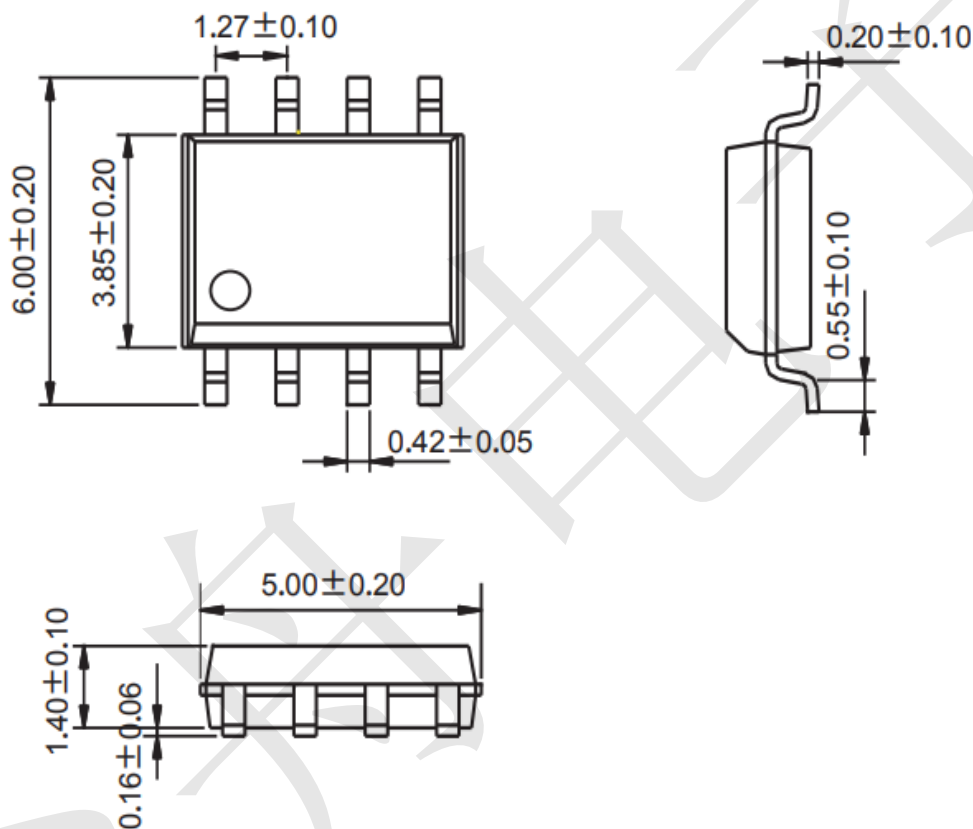


TYPICAL CHARACTERISTIC CURVES



Package information (Unit: mm)

SOP-8



Mounting Pad Layout (Unit: mm)

