

RoHS
Compliant



Features

- $V_{DS} (V) = 60V$
- $I_D = 3.7A (V_{GS} = 10V)$
- $R_{DS(ON)} < 100m\Omega (V_{GS} = 10V)$
- $R_{DS(ON)} < 120m\Omega (V_{GS} = 4.5V)$

Absolute Maximum Ratings (TA = 25°C unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	+20	
Continuous Drain Current	I_D	3.7	A
Pulsed Drain Current	I_{DM}	25	
Power Dissipation	P_D	1.4	W
Thermal Resistance.Junction- to-Ambient	R_{thJA}	55	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{stg}	-55 to 150	

Electrical Characteristics (TA = 25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	V_{DSS}	$I_D = -250\mu A, V_{GS} = 0V$	-60			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -60V, V_{GS} = 0V$			1	μA
Gate-Body leakage current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	1		3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -3.9A$			100	m Ω
		$V_{GS} = -4.5V, I_D = -3.7A$			120	
Forward Transconductance	g_{FS}	$V_{DS} = -15V, I_D = -10A$	35			S
On State Drain Current	$I_{D(on)}$	$V_{GS} = 5V, V_{DS} = 10V$	8			A
Forward Transconductance	g_{FS}	$V_{DS} = 5V, I_D = 3.7A$	3	9		S

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	C_{iss}	$V_{GS}=0V, V_{DS}=-25V, f=1MHz$			800	pF
Output Capacitance	C_{oss}				250	
Reverse Transfer Capacitance	C_{rss}				60	
Total Gate Charge	Q_g	$V_{DS}=-10V, V_{DS}=40V, I_D=-3.7A$		9	12	nC
Gate Source Charge	Q_{gs}			2		
Gate Drain Charge	Q_{gd}			6		
Turn-On Delay Time	$t_{d(on)}$	$I_D=1A, V_{DS}=25V, R_{GEN}=6\Omega$		15	20	nS
Turn-On Rise Time	t_r			18	20	
Turn-Off Delay Time	$t_{d(off)}$			40	50	
Turn-Off Fall Time	t_f			16	20	
Maximum Body-Diode Continuous Current	I_S	$I_{SD}=-12A, V_{GS}=0V$			2.5	A
Diode Forward Current	V_{SD}	$I_S=1.5A, V_{GS}=0V$			1.2	V

Typical Characteristics

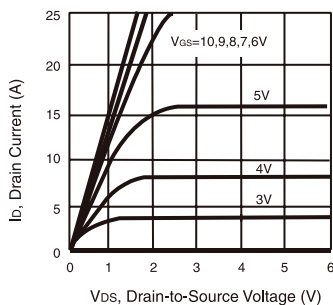


Figure 1. Output Characteristics

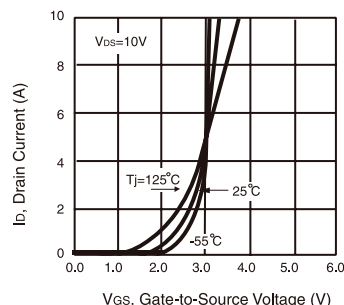


Figure 2. Transfer Characteristics

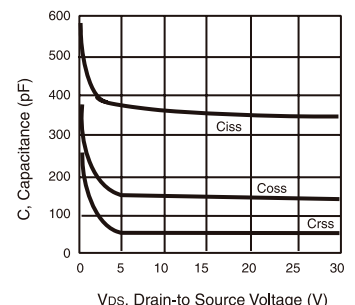


Figure 3. Capacitance

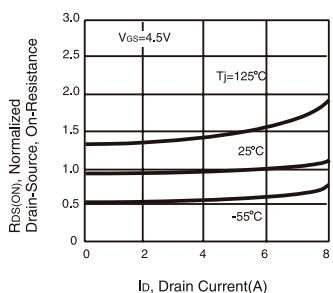


Figure 4. On-Resistance Variation with Drain Current and Temperature

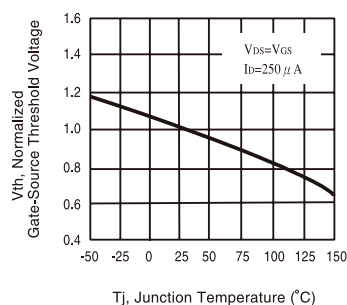


Figure 5. Gate Threshold Variation with Temperature

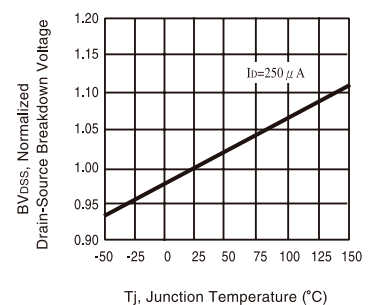


Figure 6. Breakdown Voltage Variation with Temperature

