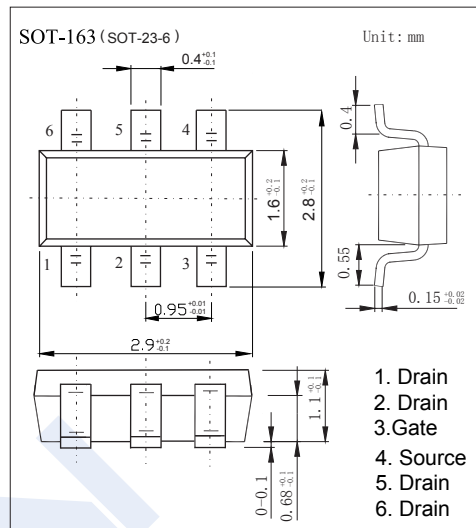


P-Channel MOSFET

SI3437DV-HF (KI3437DV-HF)

■ Features

- $V_{DS} (V) \approx -150V$
- $I_D \approx -1.4 A$ ($V_{GS} \approx -10V$)
- $R_{DS(ON)} < 750m\Omega$ ($V_{GS} \approx -10V$)
- $R_{DS(ON)} < 790m\Omega$ ($V_{GS} \approx -6V$)
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



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

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-150	V
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current ($T_J = 150^\circ C$)	$T_C = 25^\circ C$	I_D	-1.4	A
	$T_C = 70^\circ C$		-1.1	
	$T_a = 25^\circ C$ (Note.1,2)		-1.1	
	$T_a = 70^\circ C$ (Note.1,2)		-0.88	
Pulsed Drain Current		I_{DM}	-5	mJ
Avalanche Current	$L = 0.1 mH$	I_{AS}	5	
Single-Pulse Avalanche Energy		E_{AS}	1.25	W
Power Dissipation	$T_C = 25^\circ C$	P_D	3.2	
	$T_C = 70^\circ C$		2.1	
	$T_a = 25^\circ C$ (Note.1,2)		2	
	$T_a = 70^\circ C$ (Note.1,2)		1.25	
Thermal Resistance.Junction- to-Ambient	$t \leq 5 s$ (Note.3)	R_{thJA}	62.5	$^\circ C/W$
Thermal Resistance.Junction- to-Case	Steady State	R_{thJC}	39	
Junction Temperature		T_J	150	$^\circ C$
Junction Storage Temperature Range		T_{stg}	-55 to 150	

Note.1: $t = 5 s$.

Note.2: Surface Mounted on 1" x 1" FR4 board.

Note.3: Maximum under Steady State conditions is $110^\circ C/W$.

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =-250 μA, V _{GS} =0V	-150			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-150V, V _{GS} =0V			-1	μA
		V _{DS} =-150V, V _{GS} =0V, T _J =55°C			-10	
Gate-Body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =-250 μA	-2		-4	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-10V, I _D =-1.4A (Note.1)			750	mΩ
		V _{GS} =-6V, I _D =-1A (Note.1)			790	
On state drain current	I _{D(on)}	V _{GS} =-10V, V _{DS} ≥-10V (Note.1)	-3			A
Forward Transconductance	g _{FS}	V _{DS} =-10V, I _D =-1.4A (Note.1)		4.5		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-50V, f=1MHz		510		pF
Output Capacitance	C _{oss}			30		
Reverse Transfer Capacitance	C _{rss}			21		
Gate resistance	R _g	f=1MHz		8.5	13	Ω
Total Gate Charge	Q _g	V _{GS} =-10V, V _{DS} =-75V, I _D =-1A		12.2	19	nC
		V _{GS} =-6V, V _{DS} =-75V, I _D =-1A		8	12	
Gate Source Charge	Q _{gs}			2.1		
Gate Drain Charge	Q _{gd}			3.9		
Turn-On DelayTime	t _{d(on)}	V _{DD} = - 75 V, R _L = 75 Ω I _D = - 1 A, V _{GEN} = - 10 V, R _g = 1 Ω		9	15	ns
Turn-On Rise Time	t _r			11	18	
Turn-Off DelayTime	t _{d(off)}			28	42	
Turn-Off Fall Time	t _f			12	18	
Turn-On DelayTime	t _{d(on)}	V _{DD} = - 75 V, R _L = 75 Ω I _D = - 1 A, V _{GEN} = - 6 V, R _g = 1 Ω		14	21	
Turn-On Rise Time	t _r			29	44	
Turn-Off DelayTime	t _{d(off)}			23	35	
Turn-Off Fall Time	t _f			14	21	
Body Diode Reverse Recovery Time	t _{rr}	I _F =-1.2A, di/dt=100A/μs, T _J =25°C		60	90	nC
Body Diode Reverse Recovery Charge	Q _{rr}			120	180	
Reverse Recovery Fall Time	t _a			35		ns
Reverse Recovery Rise Time	t _b			25		
Maximum Body-Diode Continuous Current	I _S	T _C = 25°C			-1.4	A
Pulse Diode Forward Current	I _{SM}				-5	
Diode Forward Voltage	V _{SD}	I _S =-1A, V _{GS} =0V			-1.2	V

Note.1: Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2 %.

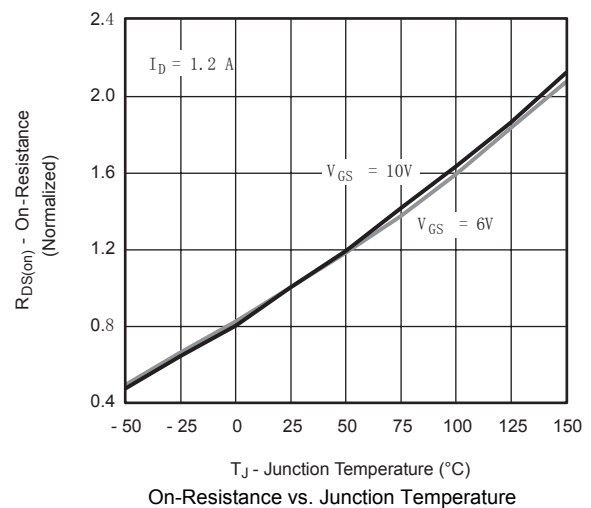
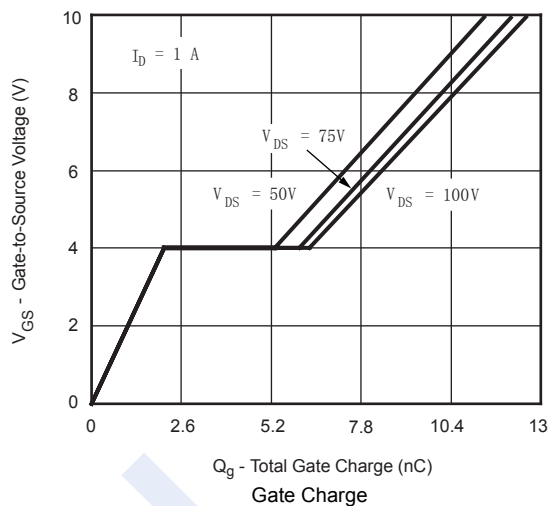
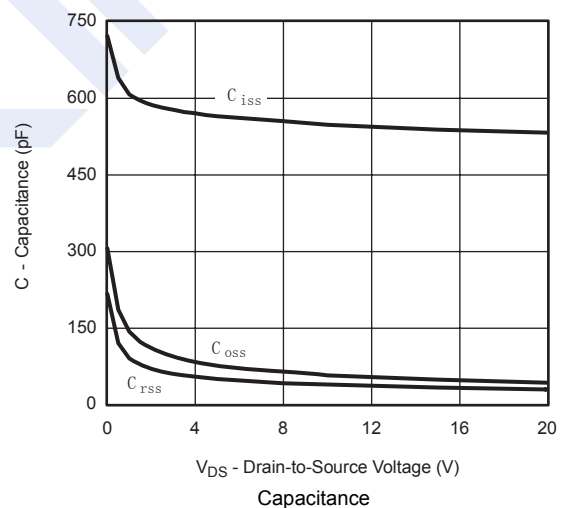
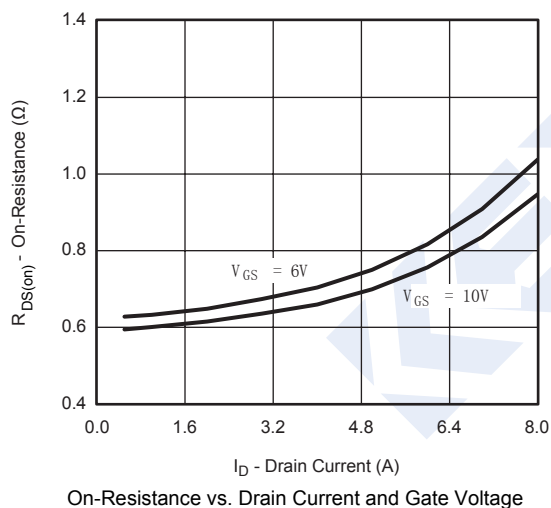
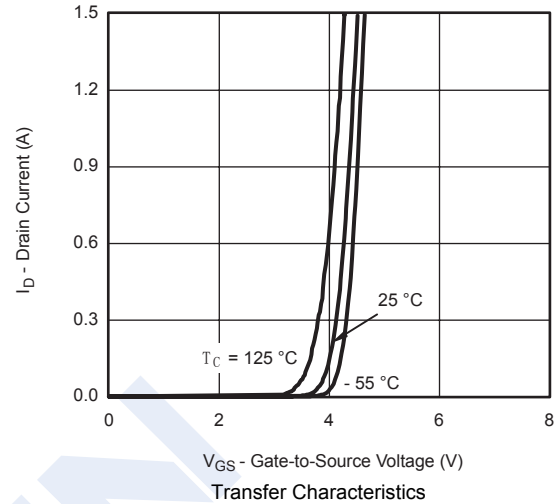
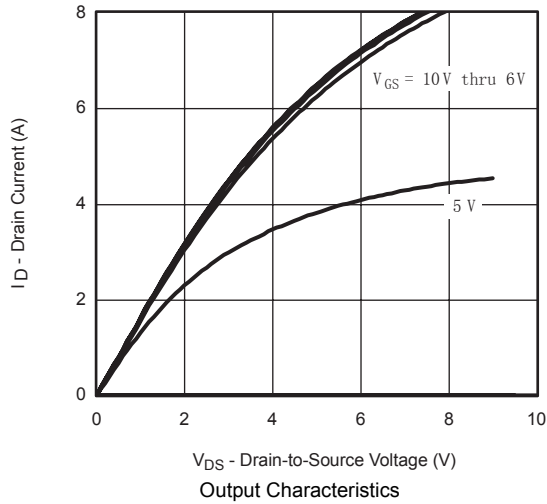
■ Marking

Marking	AH*** _F
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P-Channel MOSFET

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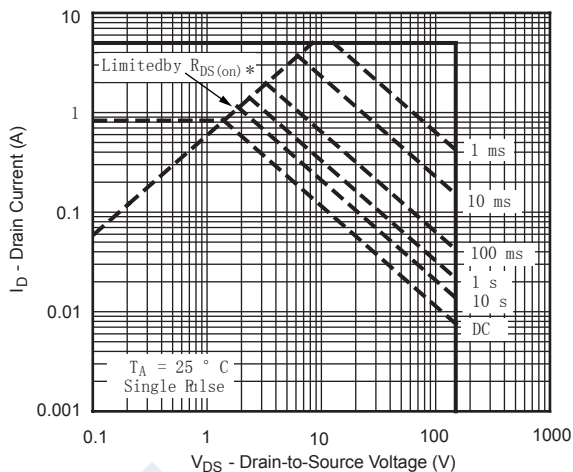
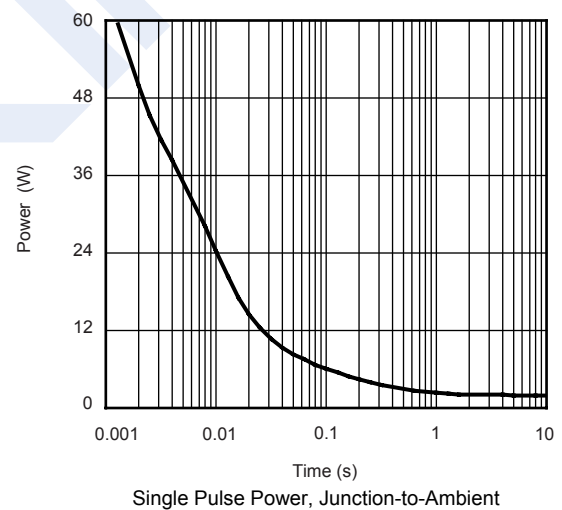
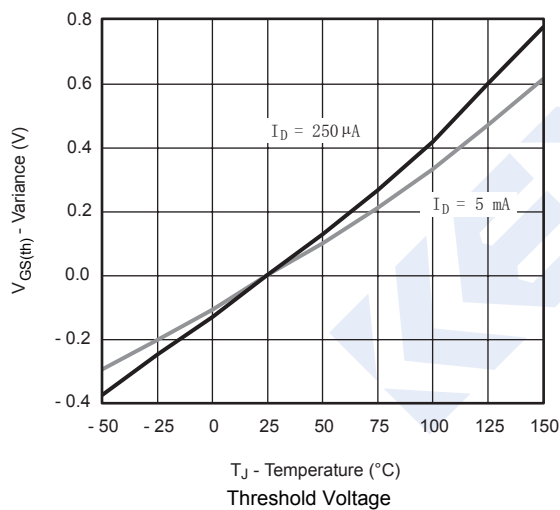
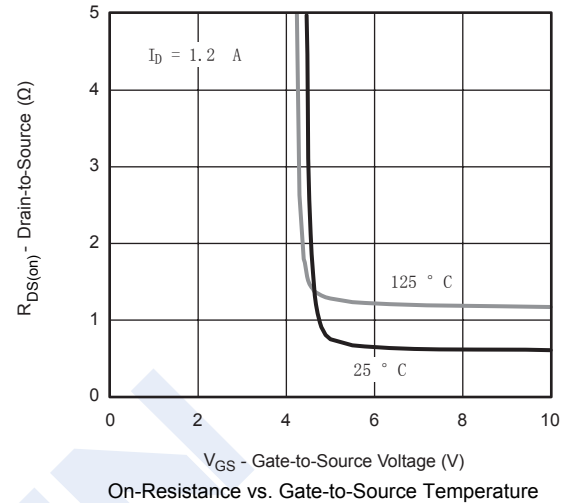
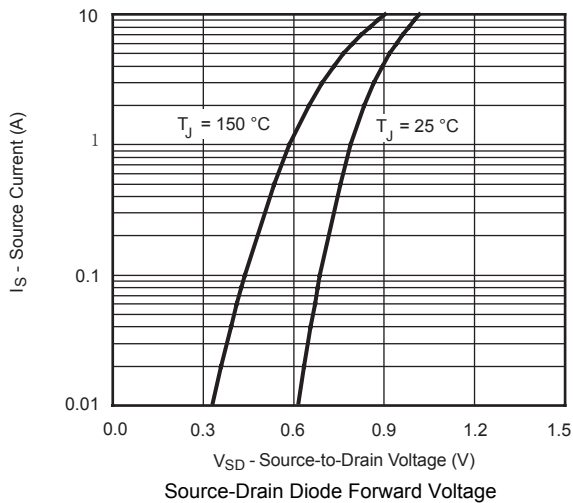
■ Typical Characteristics



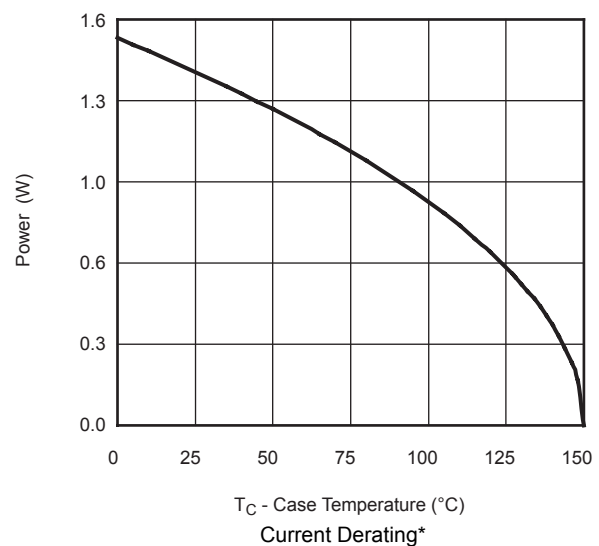
P-Channel MOSFET

SI3437DV-HF (KI3437DV-HF)

■ Typical Characteristics



* $V_{GS} >$ minimum V_{GS} at which $R_{DS(on)}$ is specified
Safe Operating Area, Junction-to-Ambient



P-Channel MOSFET

SI3437DV-HF (KI3437DV-HF)

■ Typical Characteristics

