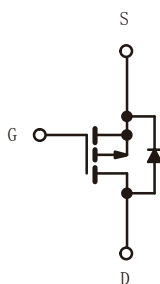


P-Channel Enhancement MOSFET

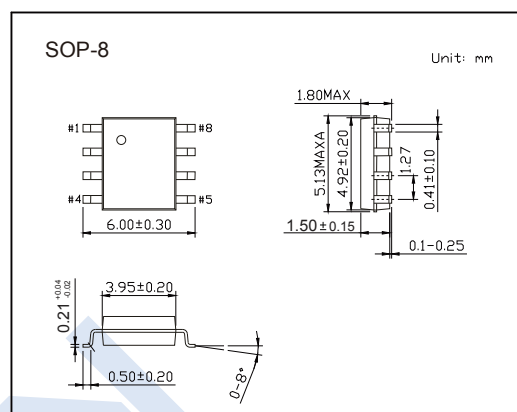
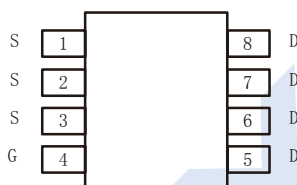
SI9435BDY (KI9435BDY)

■ Features

- $V_{DSS} = -30V$
- $I_D = -5.7A$ ($V_{GS} = -10V$)
- $R_{DS(ON)} = 42\text{ m}\Omega$ @ $V_{GS} = -10\text{ V}$
- $R_{DS(ON)} = 70\text{ m}\Omega$ @ $V_{GS} = -4.5\text{ V}$



P-Channel MOSFET



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

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V _{DS}	-30	V
Gate-Source Voltage		V _{GS}	±20	
Continuous Drain Current	TA=25°C	I _D	-5.7	A
	TA=70°C		-4.6	
Pulsed Drain Current		I _{DM}	-30	
Power Dissipation	TA=25°C *1	P _D	2.5	W
	TA=70°C *2		1.6	
Thermal Resistance.Junction- to-Ambient		R _{thJA}	50	°C/W
Thermal Resistance.Junction- to-Case		R _{thJC}	25	
Junction Temperature		T _J	150	°C
Storage Temperature Range		T _{stg}	-55 to 150	

*1 50°C/W when mounted on a 1 in² pad of 2 oz copper

*2 105°C/W when mounted on a .04 pad of 2 oz copper

P-Channel Enhancement MOSFET

SI9435BDY (K19435BDY)

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$B_{V_{DS}}$	$V_{GS} = 0\text{ V}, I_D = -250\text{ }\mu\text{A}$	-30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -30\text{ V}, V_{GS} = 0\text{ V}$			-1	μA
Gate-Body Leakage	I_{GSS}	$V_{GS} = \pm 20\text{ V}, V_{DS} = 0\text{ V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\text{ }\mu\text{A}$	-1		-3	V
Static Drain-Source	$R_{DS(on)}$	$V_{GS} = -10\text{ V}, I_D = -5.7\text{ A}$		33	42	m Ω
		$V_{GS} = -6\text{ V}, I_D = -5\text{ A}$		43	55	
		$V_{GS} = -4.5\text{ V}, I_D = -4.4\text{ A}$		56	70	
On-State Drain Current	$I_{D(on)}$	$V_{GS} = -10\text{ V}, V_{DS} = -5\text{ V}$	-20			A
Forward Transconductance	g_{FS}	$V_{DS} = -15\text{ V}, I_D = -5.7\text{ A}$		13		S
Input Capacitance	C_{iss}	$V_{DS} = -15\text{ V}, V_{GS} = 0\text{ V},$ $f = 1.0\text{ MHz}$		690		pF
Output Capacitance	C_{oss}			306		pF
Reverse Transfer Capacitance	C_{rss}			77		pF
Turn-On Delay Time	$t_{d(on)}$			14	25	ns
Turn-On Rise Time	t_r	$V_{GS} = -10\text{ V}, R_{GEN} = 6\text{ }\Omega^*$		14	25	ns
Turn-Off Delay Time	$t_{d(off)}$			42	70	ns
Turn-Off Fall Time	t_f			30	50	ns
Total Gate Charge	Q_g	$V_{DS} = -15\text{ V}, I_D = -3.5\text{ A},$ $V_{GS} = -10\text{ V}^*$		16	24	nC
Gate-Source Charge	Q_{gs}			2.3		nC
Gate-Drain Charge	Q_{gd}			4.5		nC
Maximum Continuous Drain-Source Diode Forward Current	I_S				-5.7	A
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS} = 0\text{ V}, I_S = -2.3\text{ A}^*$		-0.8	-1.1	V

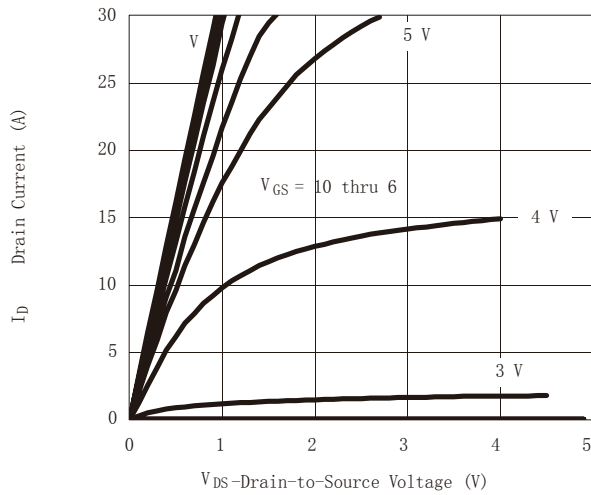
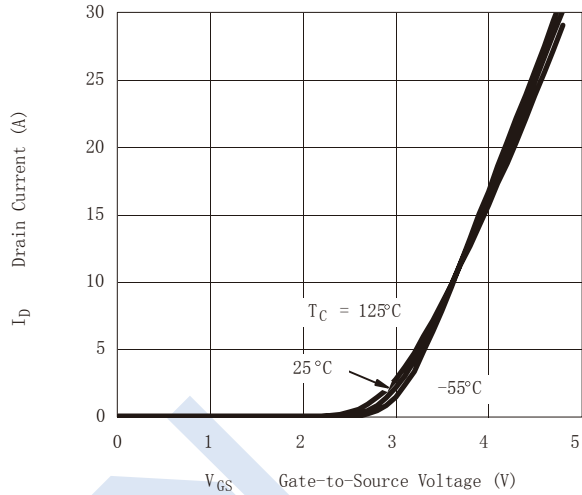
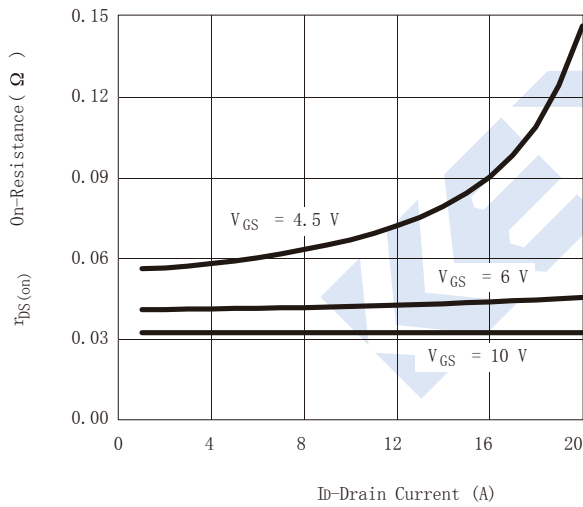
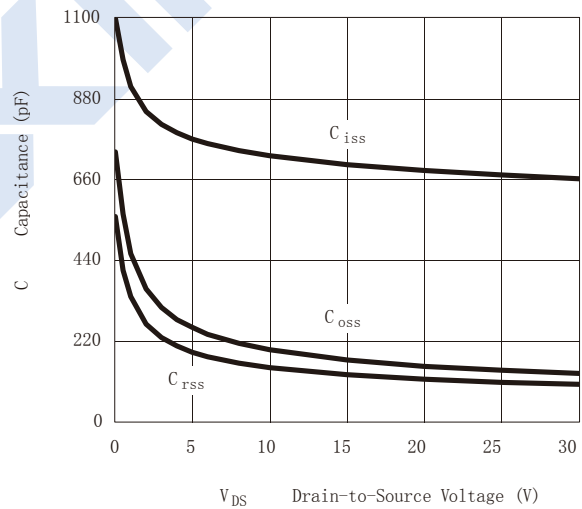
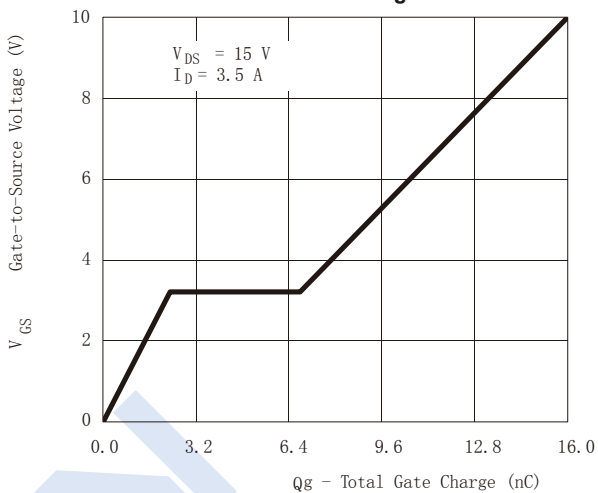
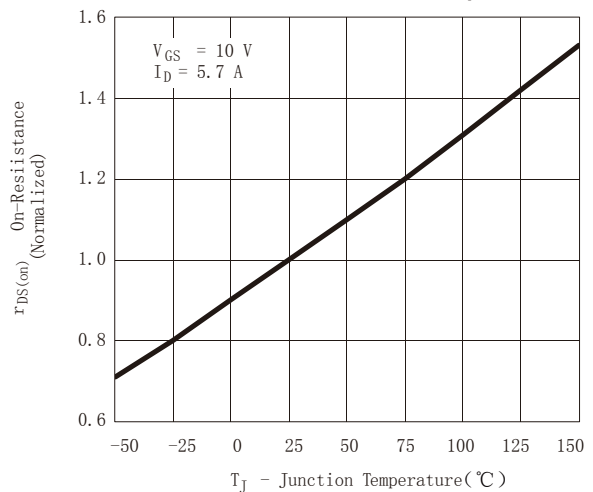
* Pulse Test: Pulse Width $< 300\text{ }\mu\text{s}$, Duty Cycle $< 2.0\%$

■ Marking

Marking	9435B KC****
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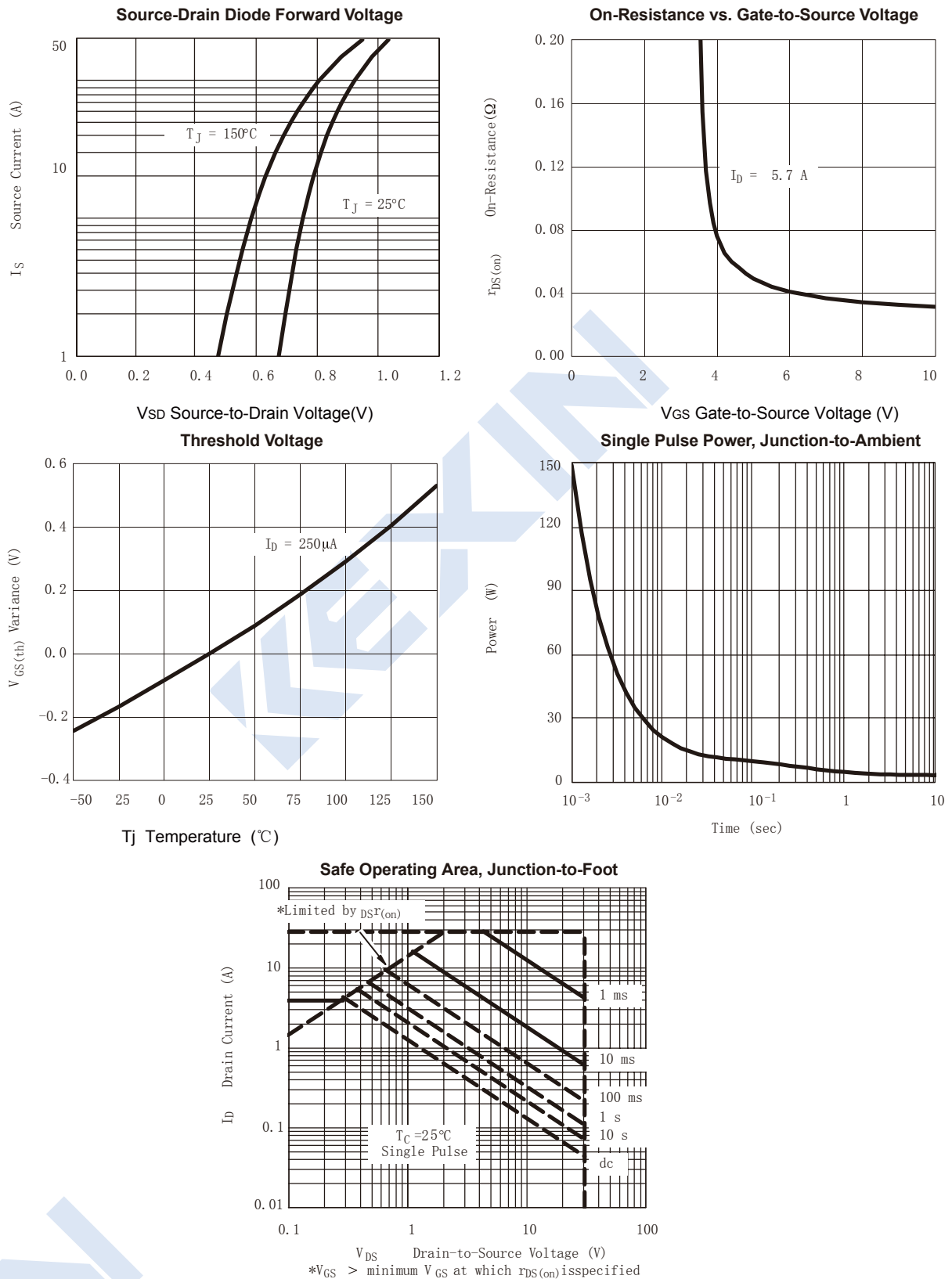
SI9435BDY (K19435BDY)

■ Typical Characteristics

Output Characteristics**Transfer Characteristics****On-Resistance vs. Drain Current****Capacitance****Gate Charge****On-Resistance vs. Junction Temperature**

SI9435BDY (K19435BDY)

■ Typical Characteristics



SI9435BDY (KI9435BDY)

■ Typical Characteristics

