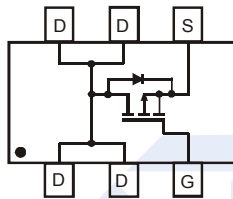
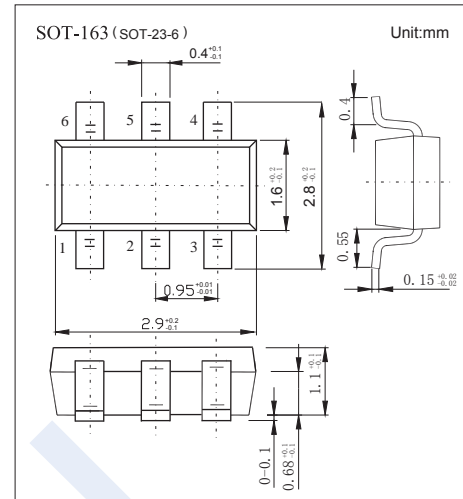


## P-Channel MOSFET KI5P02DV

### ■ Features

- $V_{DS}(V) = -20V$
- $I_D = -4.6 A$
- $R_{DS(ON)} < 40m\Omega$  ( $V_{GS} = -4.5V$ )
- $R_{DS(ON)} < 70m\Omega$  ( $V_{GS} = -2.5V$ )
- Low Input/Output Leakage



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

Parameter	Symbol	Rating	Unit	
Drain-Source Voltage	$V_{DS}$	-20	V	
Gate-Source Voltage	$V_{GS}$	$\pm 12$		
Continuous Drain Current	$I_D$	$T_a = 25^\circ C$	-4.6	A
		$T_a = 70^\circ C$	-3.7	
Pulsed Drain Current	$I_{DM}$	-18		
Power Dissipation	$P_D$	1.25	W	
Thermal Resistance.Junction- to-Ambient	$R_{thJA}$	100	$^\circ C/W$	
Junction Temperature	$T_J$	150	$^\circ C$	
Storage Temperature Range	$T_{stg}$	-55 to 150		

## P-Channel MOSFET KI5P02DV

### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V <sub>BSS</sub>	I <sub>D</sub> =-250 μA, V <sub>GS</sub> =0V	-20			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-20V, V <sub>GS</sub> =0V			-1	μA
Gate-Body leakage current	I <sub>GSS</sub>	V <sub>BS</sub> =0V, V <sub>GS</sub> =±12V			±100	nA
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =-250 μA	-0.6		-1.2	V
Static Drain-Source On-Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-4.6A			40	mΩ
		V <sub>GS</sub> =-2.5V, I <sub>D</sub> =-3.8A			70	
On state drain current	I <sub>D(on)</sub>	V <sub>GS</sub> =-4.5V, V <sub>DS</sub> =-5V	-15			A
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =-10V, I <sub>D</sub> =-4.6A		9		S
Input Capacitance	C <sub>iss</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =-15V, f=1MHz		820		pF
Output Capacitance	C <sub>oss</sub>			200		
Reverse Transfer Capacitance	C <sub>rss</sub>			160		
Gate resistance	R <sub>g</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =0V, f=1MHz		2.5		Ω
Total Gate Charge	Q <sub>g</sub>	V <sub>GS</sub> =-4.5V, V <sub>DS</sub> =-10V, I <sub>D</sub> =-4.5A		10.1		nC
Gate Source Charge	Q <sub>gs</sub>			1.5		
Gate Drain Charge	Q <sub>gd</sub>			4.3		
Turn-On DelayTime	t <sub>d(on)</sub>	V <sub>DS</sub> = -10V, V <sub>GS</sub> = -4.5V, I <sub>D</sub> = -1A, R <sub>G</sub> = 6Ω		4.4		ns
Turn-On Rise Time	t <sub>r</sub>			9.9		
Turn-Off DelayTime	t <sub>d(off)</sub>			28		
Turn-Off Fall Time	t <sub>f</sub>			23.4		
Maximum Body-Diode Continuous Current	I <sub>S</sub>				-1.7	A
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-2.1A, V <sub>GS</sub> =0V	-0.5		-1.4	V

### ■ Marking

Marking	5P02
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## P-Channel MOSFET KI5P02DV

### ■ Typical Characteristics

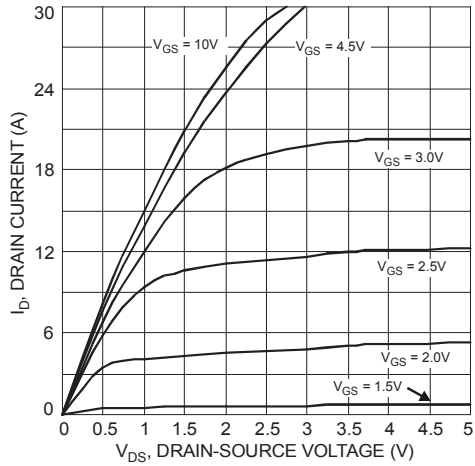


Fig. 1 Typical Output Characteristic

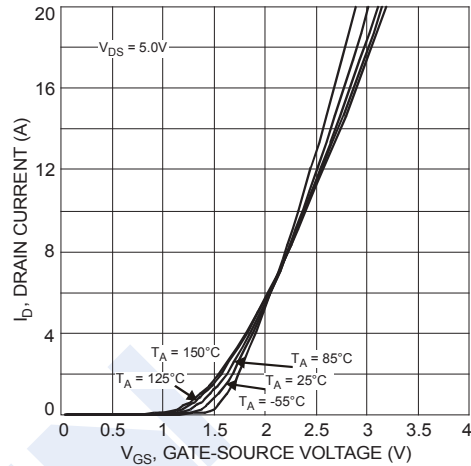


Fig. 2 Typical Transfer Characteristic

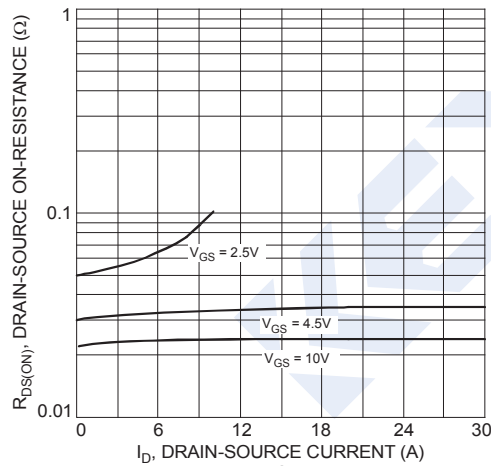


Fig. 3 Typical On-Resistance vs. Drain Current and Gate Voltage

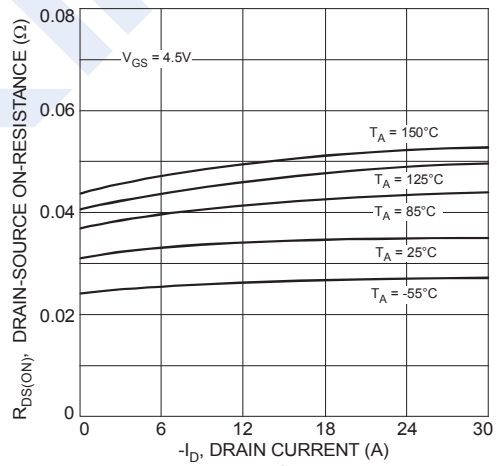


Fig. 4 Typical On-Resistance vs. Drain Current and Temperature

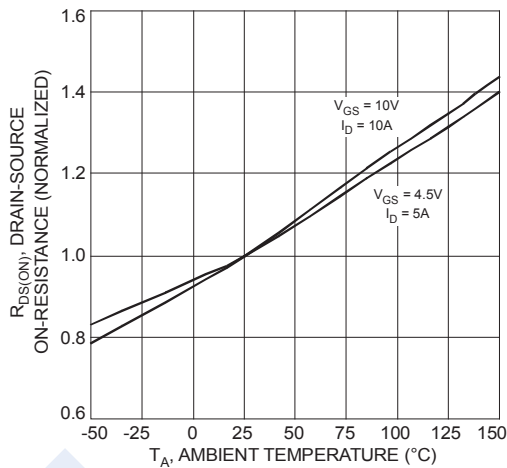


Fig. 5 Normalized On-Resistance vs. Ambient Temperature

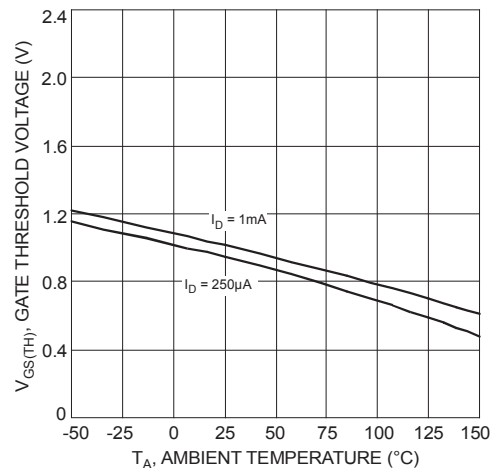


Fig. 6 Gate Threshold Variation vs. Ambient Temperature

## P-Channel MOSFET KI5P02DV

### Typical Characteristics

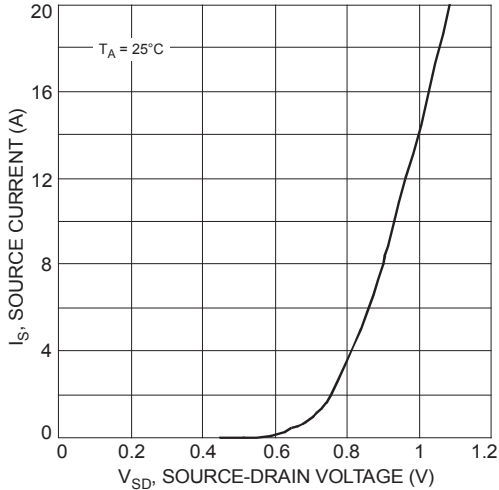


Fig. 7 Diode Forward Voltage vs. Current

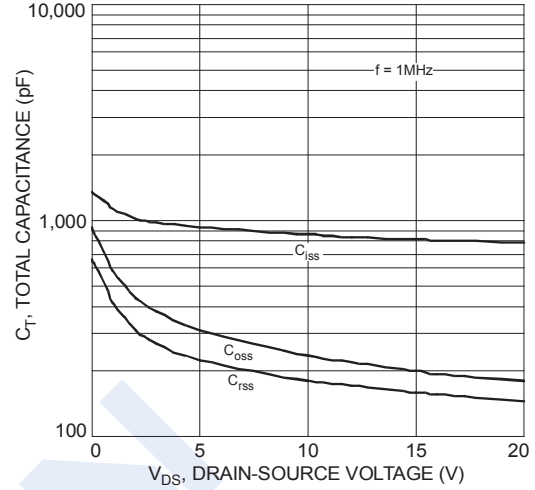


Fig. 8 Typical Total Capacitance

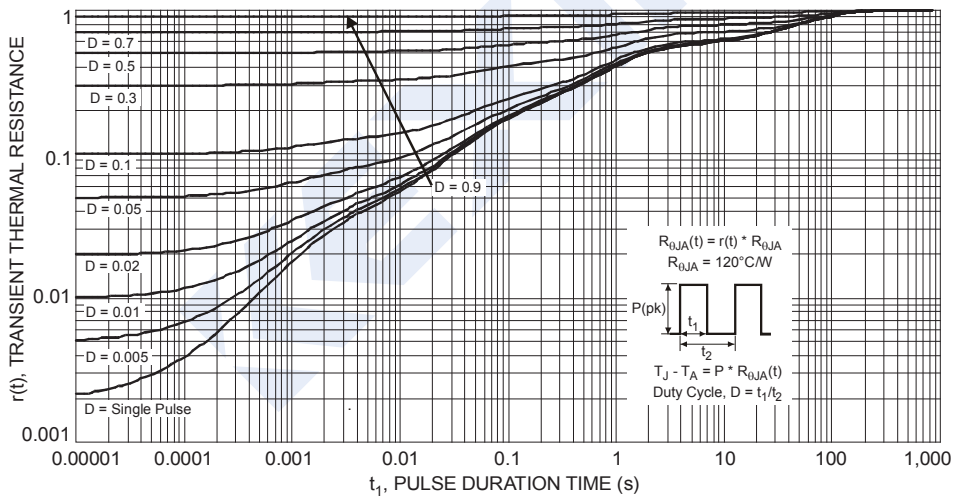


Fig. 9 Transient Thermal Response