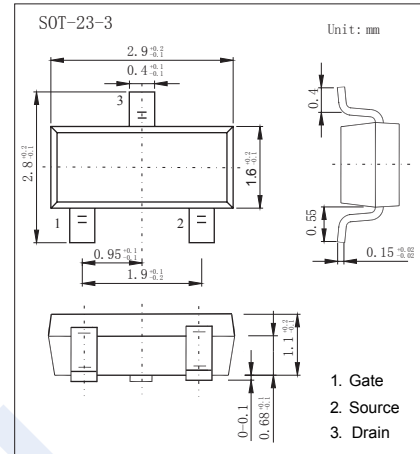
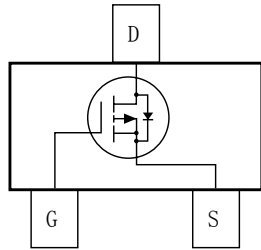


P-Channel MOSFET

FDN352AP-HF (KDN352AP-HF)

■ Features

- $V_{DS} (V) = -30V$
- $I_D = -1.3 A (V_{GS} = -10V)$
- $R_{DS(ON)} < 180m\Omega (V_{GS} = -10V)$
- $R_{DS(ON)} < 300m\Omega (V_{GS} = -4.5V)$
- 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}	-30	V
Gate-Source Voltage	V_{GS}	± 25	
Continuous Drain Current	I_D	-1.3	A
Pulsed Drain Current	I_{DM}	-10	
Power Dissipation (Note.1) (Note.2)	P_D	0.5	W
		0.46	
Thermal Resistance.Junction- to-Ambient	R_{thJA}	250	$^\circ C/W$
Thermal Resistance.Junction- to-Case	R_{thJC}	75	
Junction Temperature	T_J	150	$^\circ C$
Junction Storage Temperature Range	T_{stg}	-55 to 150	

Note.1: $R_{\theta JA} = 250^\circ C/W$ when mounted on a 0.02 in² pad of 2oz. copper.

Note.2: $R_{\theta JA} = 270^\circ C/W$ when mounted on a 0.001 in² pad of 2oz. copper.

P-Channel MOSFET

FDN352AP-HF (KDN352AP-HF)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{BSS}	I _D =-250 μA, V _{GS} =0V	-30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-24V, V _{GS} =0V			-1	μA
Gate-Body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} =±25V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =-250 μA (Note.1)	-0.8		-2.5	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-10V, I _D =-1.3A (Note.1)			180	mΩ
		V _{GS} =-4.5V, I _D =-1.1A (Note.1)			300	
		V _{GS} =-4.5V, I _D =-1.1A, T _J =125°C (Note.1)			400	
Forward Transconductance	g _{FS}	V _{DS} =-5V, I _D =-0.9A		2		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-15V, f=1MHz		150		pF
Output Capacitance	C _{oss}			40		
Reverse Transfer Capacitance	C _{rss}			20		
Total Gate Charge	Q _g	V _{GS} =-4.5V, V _{DS} =-10V, I _D =-0.9A (Note.1)		1.4	1.9	nC
Gate Source Charge	Q _{gs}			0.5		
Gate Drain Charge	Q _{gd}			0.5		
Turn-On DelayTime	t _{d(on)}	V _{GS} =-10V, V _{DS} =-10V, I _D =-1A, R _G =6Ω (Note.1)			8	ns
Turn-On Rise Time	t _r				28	
Turn-Off DelayTime	t _{d(off)}				18	
Turn-Off Fall Time	t _f				2	
Body Diode Reverse Recovery Time	t _{rr}	I _F =-3.9A, di/dt=100A/μs		17		nC
Body Diode Reverse Recovery Charge	Q _{rr}			7		
Maximum Body-Diode Continuous Current	I _S				-0.42	A
Diode Forward Voltage	V _{SD}	I _S =-0.42A, V _{GS} =0V (Note.1)			-1.2	V

Note.1:Pulse Test: Pulse Width < 300 μs, Duty Cycle < 2.0%

■ Marking

Marking	52AP _F
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P-Channel MOSFET FDN352AP-HF (KDN352AP-HF)

■ Typical Characteristics

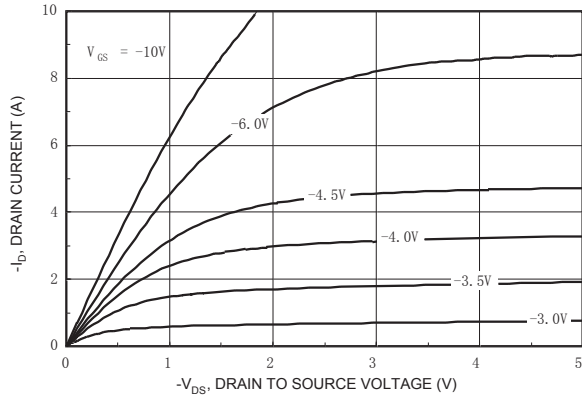


Figure 1. On-Region Characteristics.

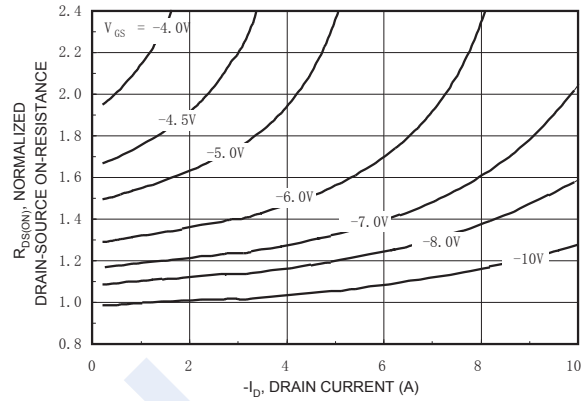


Figure 2. On-Resistance Variation with Drain Current and Gate Voltage.

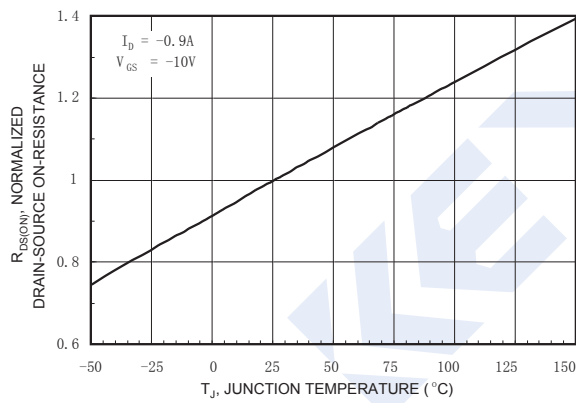


Figure 3. On-Resistance Variation with Temperature.

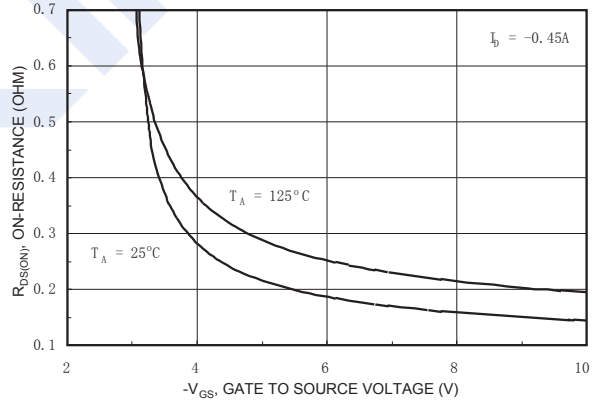


Figure 4. On-Resistance Variation with Gate-to-Source Voltage.

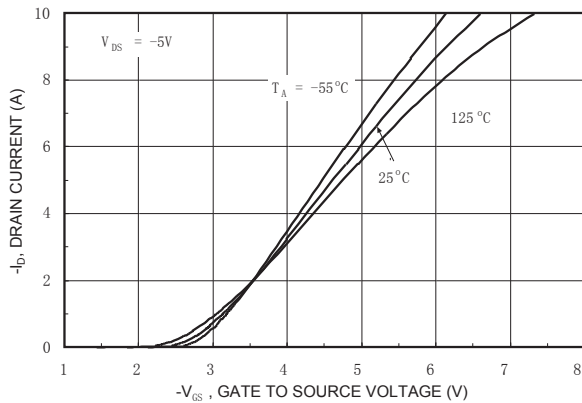


Figure 5. Transfer Characteristics.

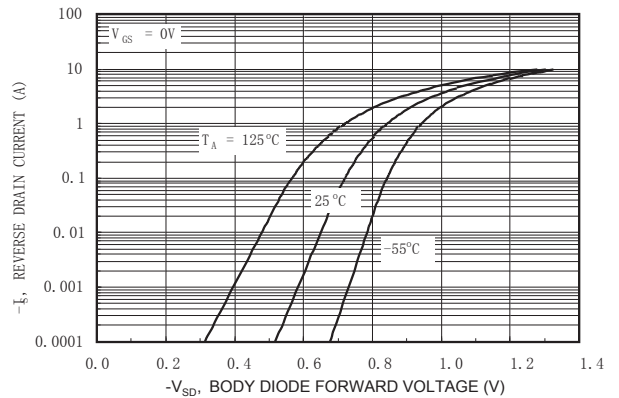


Figure 6. Body Diode Forward Voltage Variation with Source Current and Temperature.

P-Channel MOSFET FDN352AP-HF (KDN352AP-HF)

■ Typical Characteristics

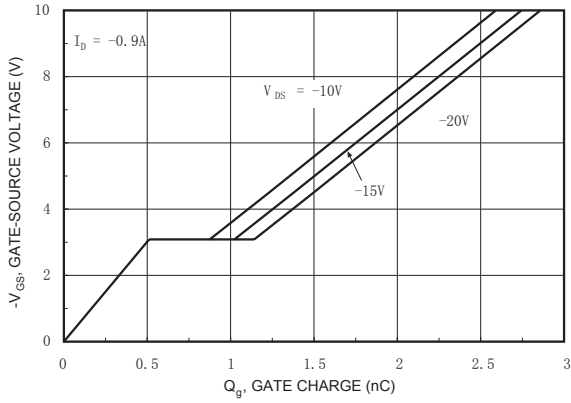


Figure 7. Gate Charge Characteristics.

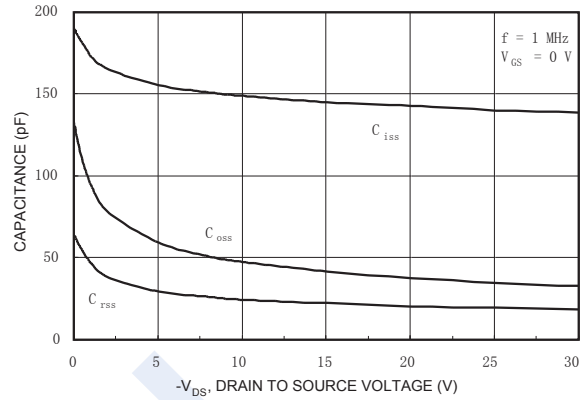


Figure 8. Capacitance Characteristics.

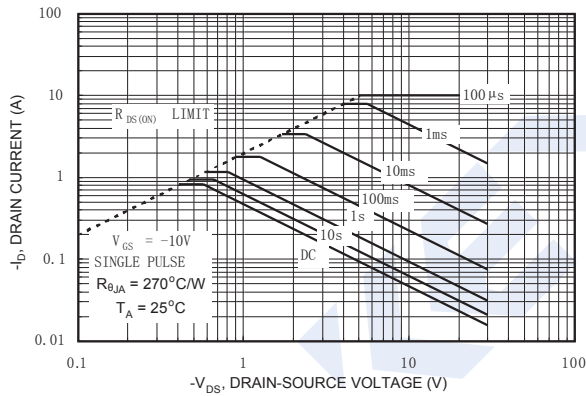


Figure 9. Maximum Safe Operating Area.

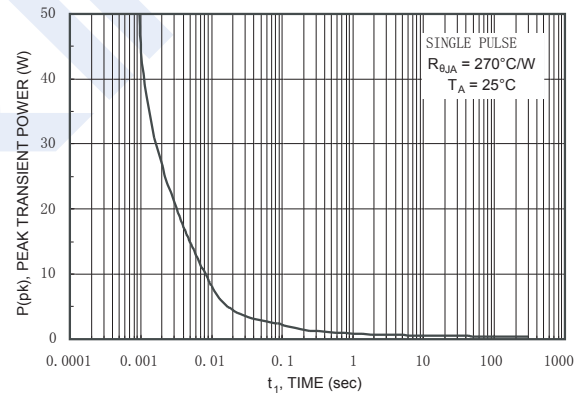


Figure 10. Single Pulse Maximum Power Dissipation.

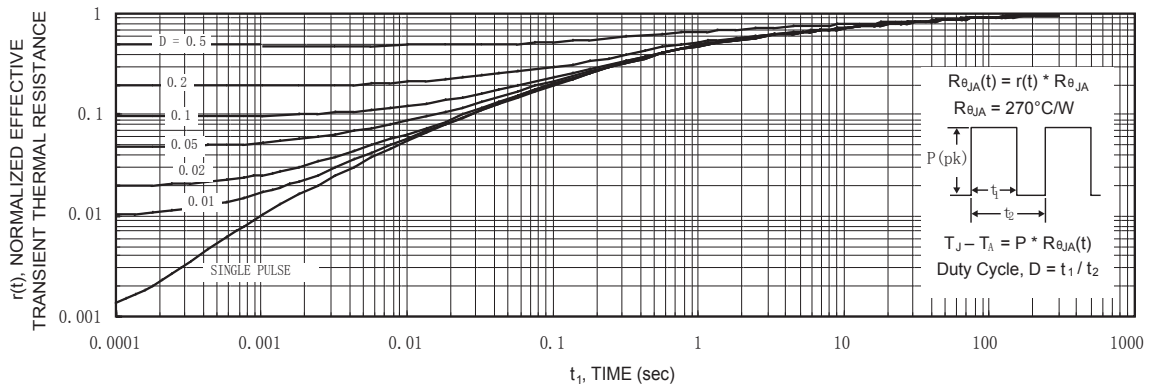


Figure 11. Transient Thermal Response Curve.