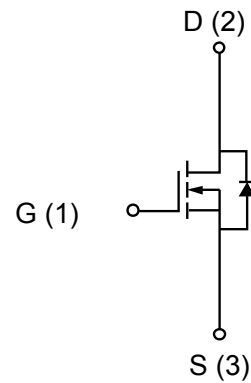


Description

The MOSFET provide the best combination of fast switching, low on-resistance and cost-effectiveness.

MOSFET Product Summary		
V _{DS} (V)	R _{DS(on)} (mΩ)	I _D (A)
30	4@V _{GS} =10V	80


Absolute maximum rating@25°C

Parameter	Symbol	Maximum	Units
Drain-Source Voltage	V _{DS}	30	V
Gate-Source Voltage	V _{GS}	±20	V
Drain Current- Continuous(T _J =150°C)*	I _D	T _A =25°C	80
		T _A =70°C	47
Drain Current-Pulsed	I _{DM}	240	A
Maximum Power Dissipation*	P _D	T _A =25°C	42
		T _A =70°C	27
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to 150	°C
Thermal Resistance, Junction-to-Case	R _{θJC}	3.0	°C/W

*The device mounted on 1in² FR4 board with 2 oz copper

Electrical characteristics per line @25°C (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Static						
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D = 250\mu A, V_{GS} = 0V$	30		-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 30V, V_{GS} = 0V$	-	-	1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			± 10	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1		3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 15A$	-	7	9	m Ω
		$V_{GS} = 10V, I_D = 30A$		4	4.8	
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS} = 0V, I_S = 2.7A$		0.8		V
Dynamic						
Input Capacitance	C_{iss}	$V_{DS} = 15V, V_{GS} = 0V,$ $f = 1.0MHz$		2400	2700	pF
Output Capacitance	C_{oss}			350		
Reverse Transfer Capacitance	C_{rss}			110		
Gate Resistance	R_g	$f = 1MHz$		0.9		Ω
Total Gate Charge	Q_g	$V_{GS} = 10V, V_{DS} = 15V,$ $I_D = 17A$		53	60	nC
Total Gate Charge	Q_g	$V_{GS} = 4.5V, V_{DS} = 15V,$ $I_D = 17A$		27		nC
Gate-Source Charge	Q_{gs}			11		
Gate-Drain Charge	Q_{gd}			14		
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = 15V, V_{GEN} = 10V,$ $R_G = 6\Omega, R_L = 15\Omega,$ $I_D = 1.0A$	-	23	30	ns
Turn-Off Delay Time	$t_{d(off)}$		-	76	100	
Turn-On Rise Time	t_r		-	17	22	
Turn-On Fall Time	t_f		-	15	20	

Typical Characteristics

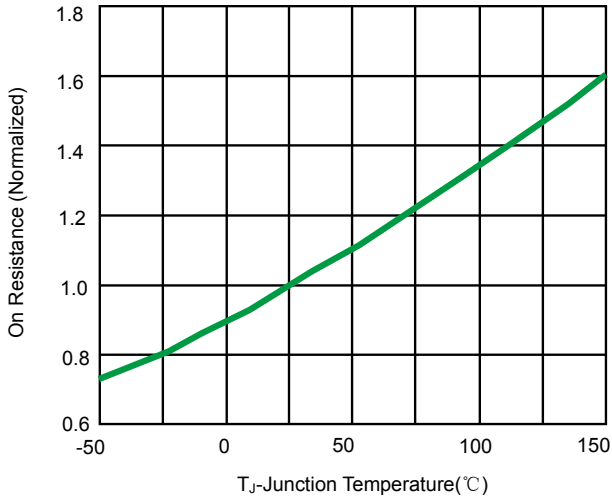


Fig 1. On Resistance vs. Junction Temperature

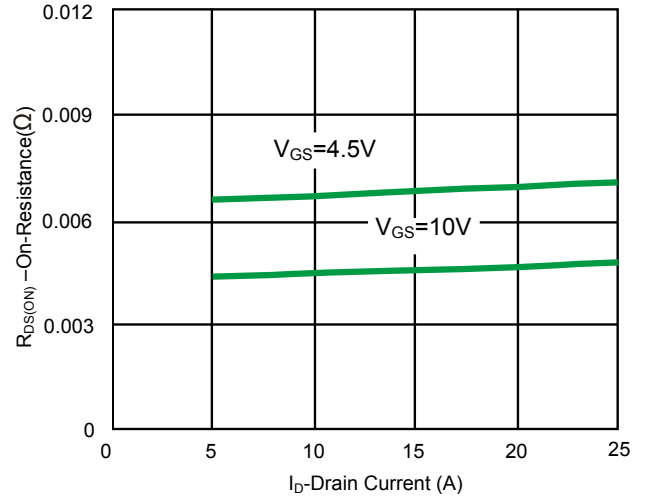


Fig 2. On-Resistance vs. Drain Current

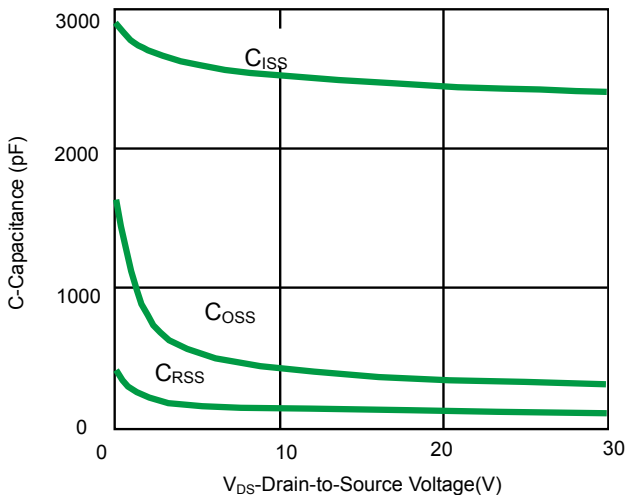


Fig 3. Capacitance

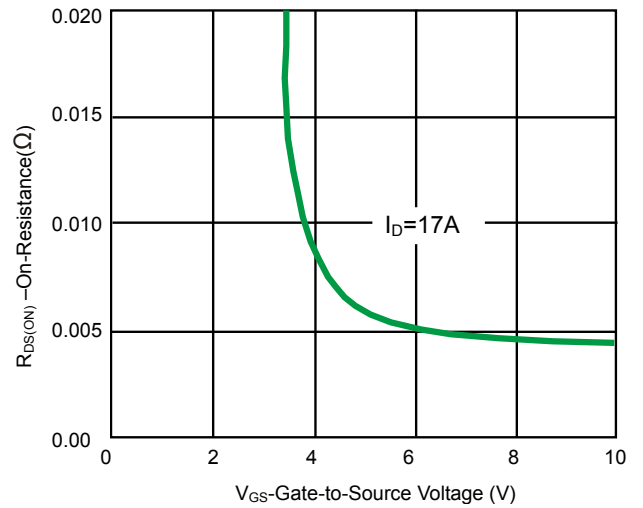


Fig 4. On-Resistance vs. Gate-to-Source Voltage

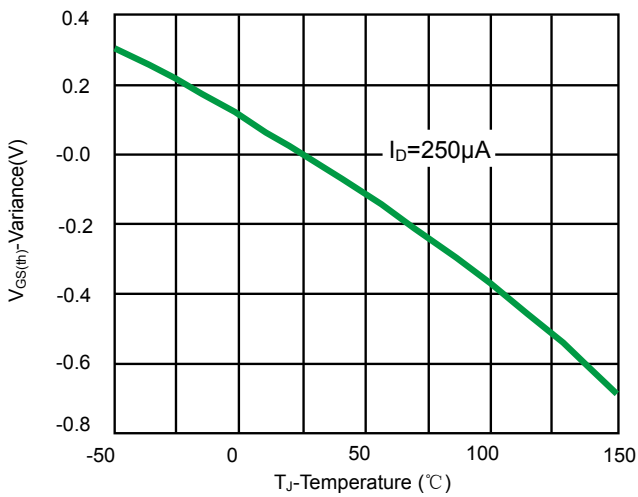


Fig 5. Threshold Voltage

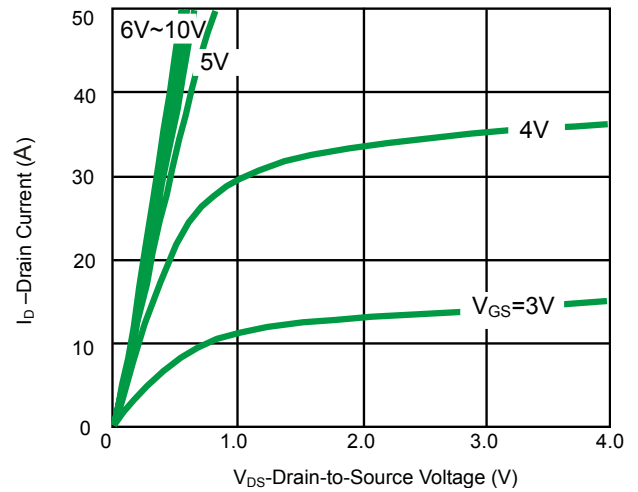
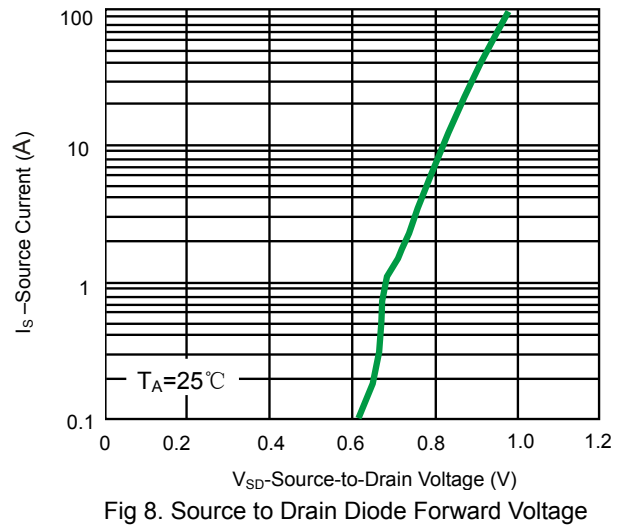
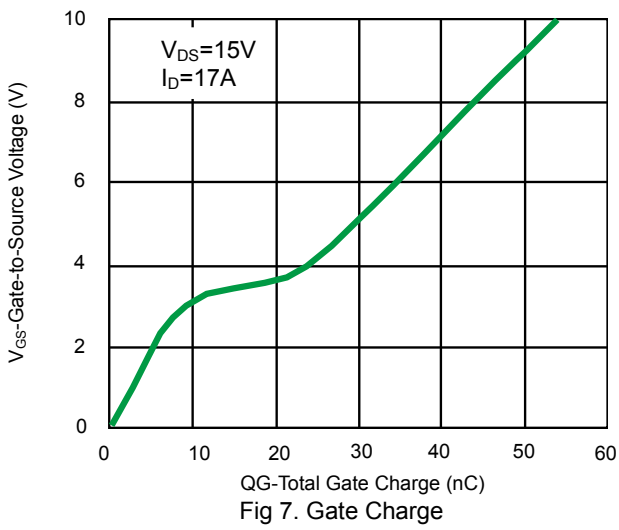
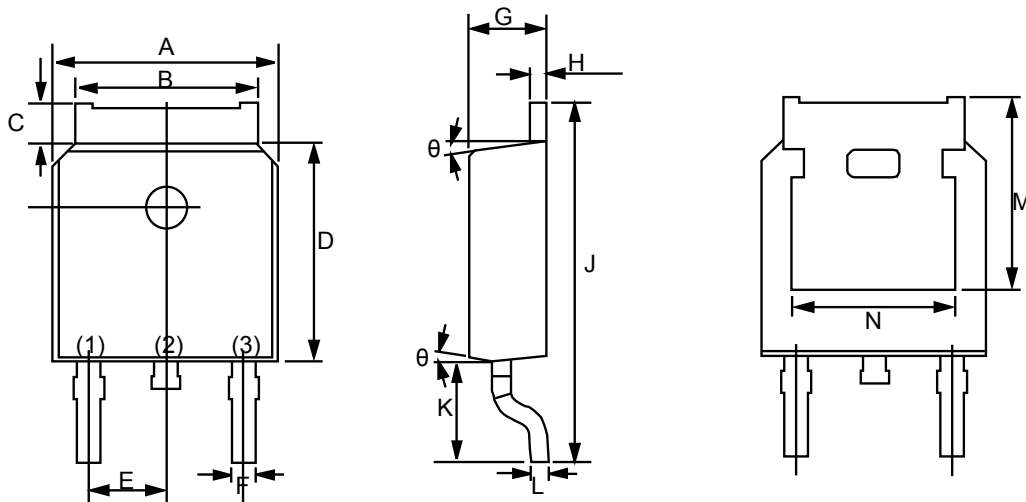


Fig 6. On-Region Characteristics




Product dimension(TO-252)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	6.50	6.70	0.255	0.263
B	5.23	5.46	0.205	0.214
C	0.90	1.25	0.035	0.049
D	6.00	6.20	0.236	0.244
E	2.286BSC.		0.09BSC.	
F	0.72	0.85	0.028	0.033
G	2.20	2.38	0.086	0.093
H	0.47	0.58	0.018	0.022
J	9.90	10.30	0.389	0.405
K	2.90REF.		0.114REF.	
L	0.51BSC.		0.020BSC.	
M	5.30REF.		0.208REF.	
N	4.70	4.92	0.185	0.193
θ	5°	9°	5°	9°


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