

Gate-Body Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±20V,V <sub>DS</sub> =0V	-	-	±100	nA
On Characteristics (Note 3)						
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> ,I <sub>D</sub> =-250μA	-1.0	-1.5	-2.5	V
Drain-Source On-State Resistance	R <sub>DS(ON)</sub>	V <sub>GS</sub> =-10V, I <sub>D</sub> =-15A	-	6.4	9	mΩ
	R <sub>DS(ON)</sub>	V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-10A	-	8.3	14	
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =-10V,I <sub>D</sub> =-15A	30	-	-	S
Dynamic Characteristics (Note4)						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =-15V,V <sub>GS</sub> =0V, F=1.0MHz	-	3960	-	PF
Output Capacitance	C <sub>oss</sub>		-	486	-	PF
Reverse Transfer Capacitance	C <sub>rss</sub>		-	268	-	PF
Switching Characteristics (Note 4)						
Turn-on Delay Time	t <sub>d(on)</sub>	V <sub>DD</sub> =-15V, ID=-10A, V <sub>GS</sub> =-10V,R <sub>GEN</sub> =3Ω	-	20	-	nS
Turn-on Rise Time	t <sub>r</sub>		-	13	-	nS
Turn-Off Delay Time	t <sub>d(off)</sub>		-	55	-	nS
Turn-Off Fall Time	t <sub>f</sub>		-	21	-	nS
Total Gate Charge	Q <sub>g</sub>	V <sub>DS</sub> =-15V,I <sub>D</sub> =-10A,V <sub>GS</sub> =-10V	-	65	-	nC
Gate-Source Charge	Q <sub>gs</sub>		-	12	-	nC
Gate-Drain Charge	Q <sub>gd</sub>		-	14	-	nC
Drain-Source Diode Characteristics						
Diode Forward Voltage (Note 3)	V <sub>SD</sub>	V <sub>GS</sub> =0V,I <sub>S</sub> =-25A	-	-	-1.2	V

#### Notes

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board,  $t \leq 10$  sec.
3. Pulse Test: Pulse Width  $\leq 300\mu s$ , Duty Cycle  $\leq 2\%$ .
4. Guaranteed by design, not subject to production



## RATING AND CHARACTERISTICS CURVES (RM25P30S8)

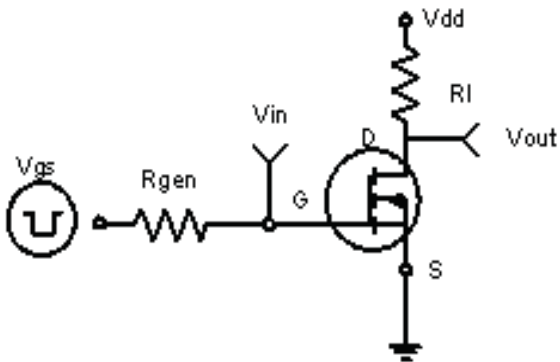


Figure 1 Switching Test Circuit

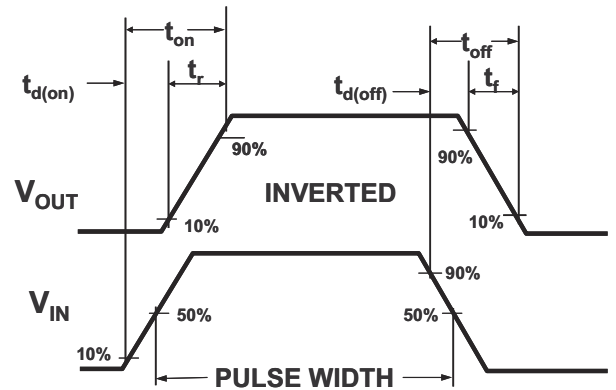


Figure 2 Switching Waveforms

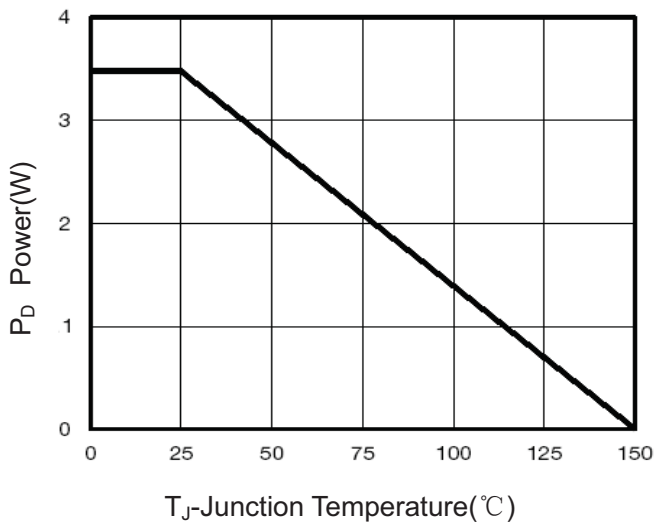


Figure 3 Power Dissipation

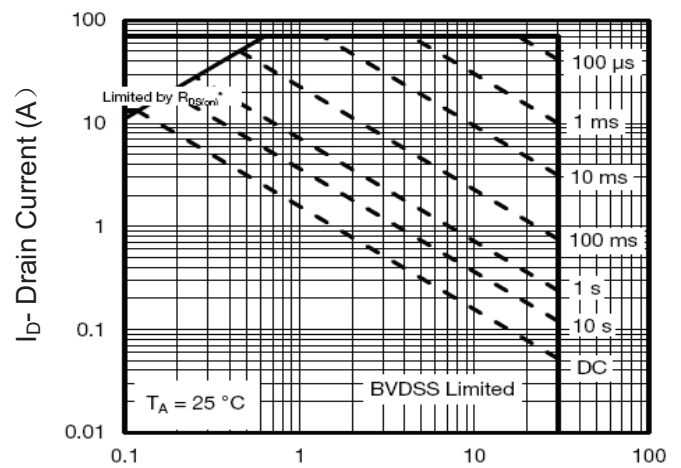


Figure 4 Safe Operation Area

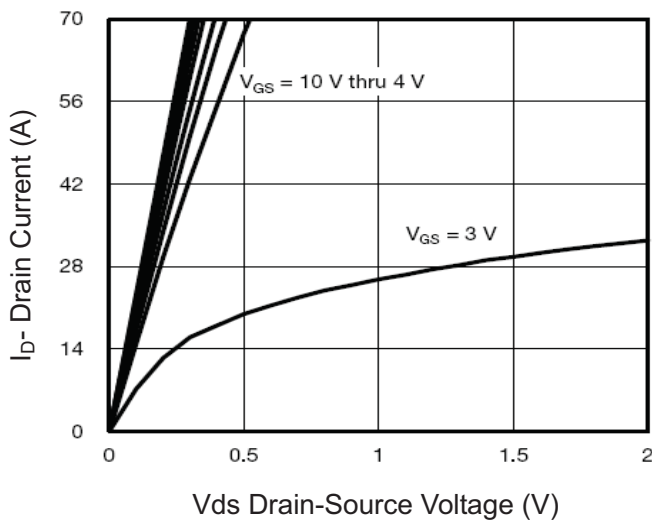


Figure 5 Output Characteristics

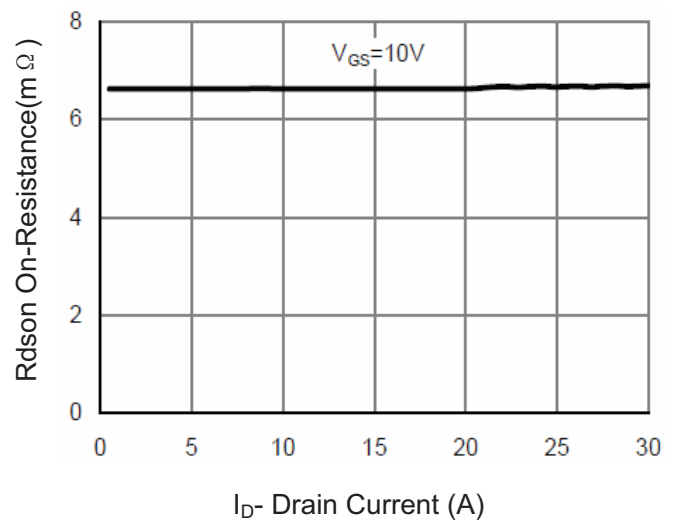


Figure 6 Drain-Source On-Resistance

## RATING AND CHARACTERISTICS CURVES (RM25P30S8)

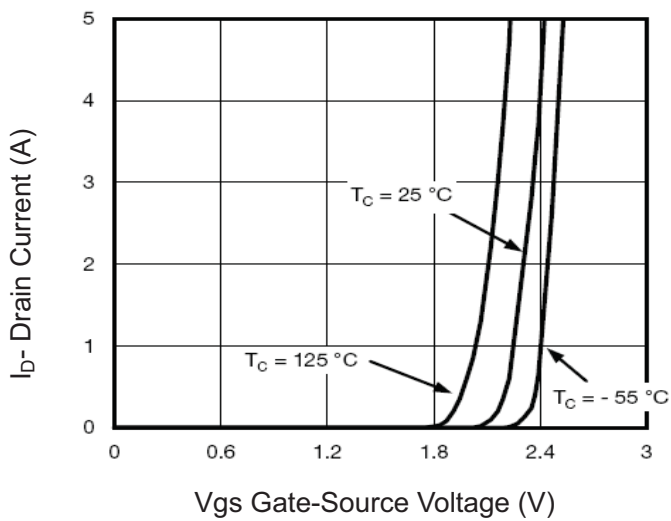


Figure 7 Transfer Characteristics

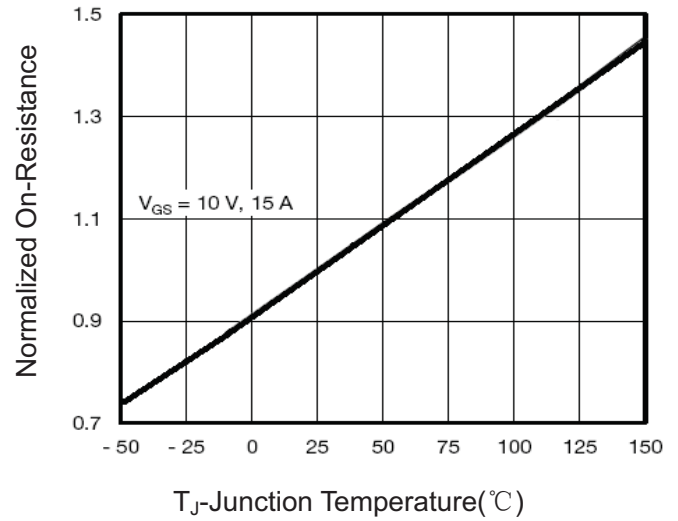


Figure 8 Drain-Source On-Resistance

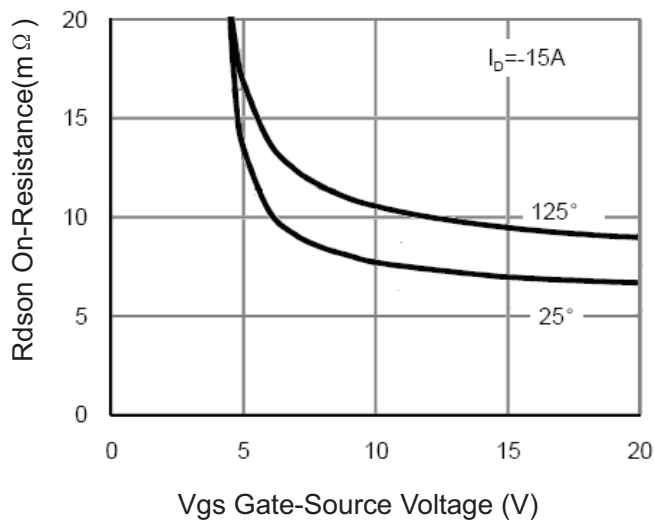


Figure 9  $R_{DS(on)}$  vs  $V_{GS}$

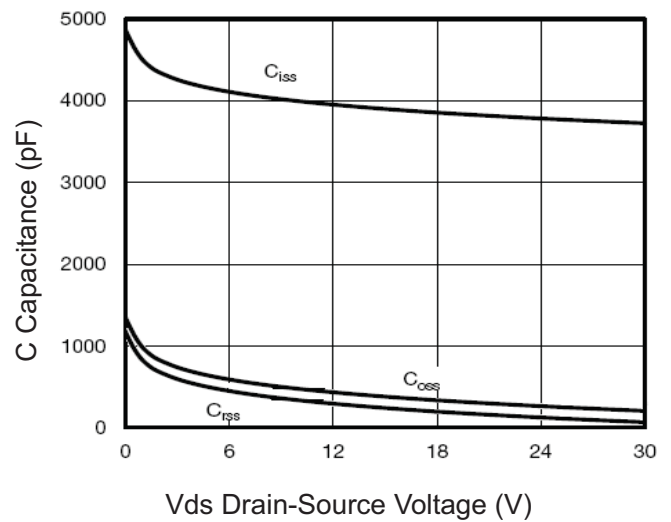


Figure 10 Capacitance vs  $V_{DS}$

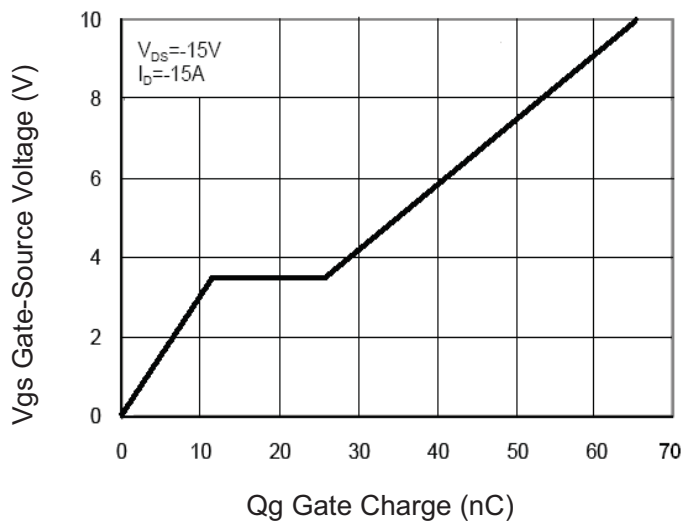


Figure 11 Gate Charge

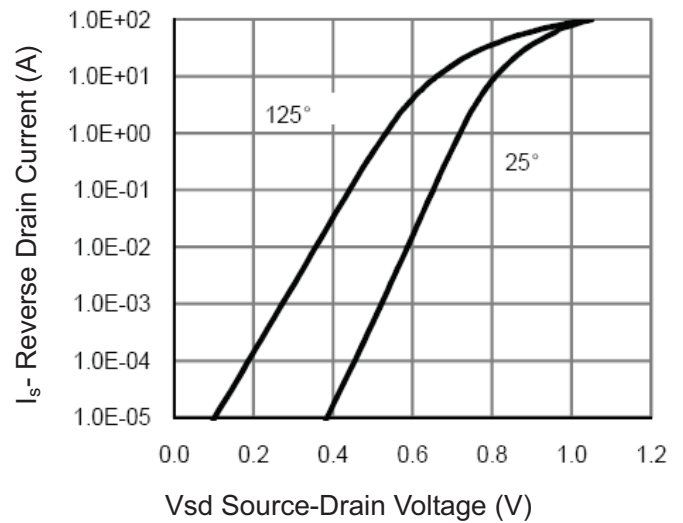
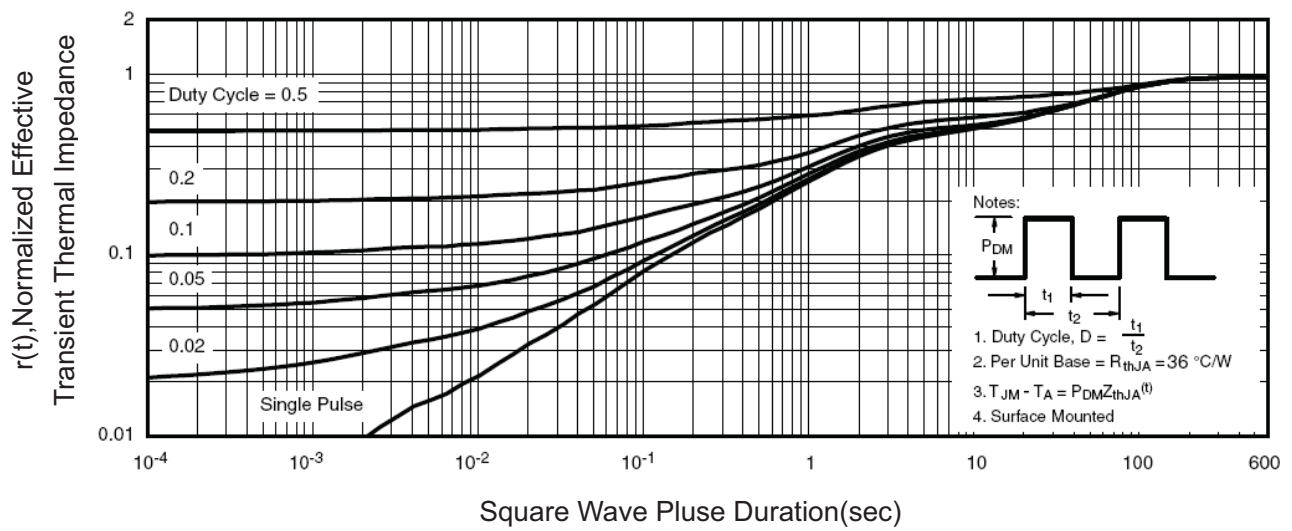


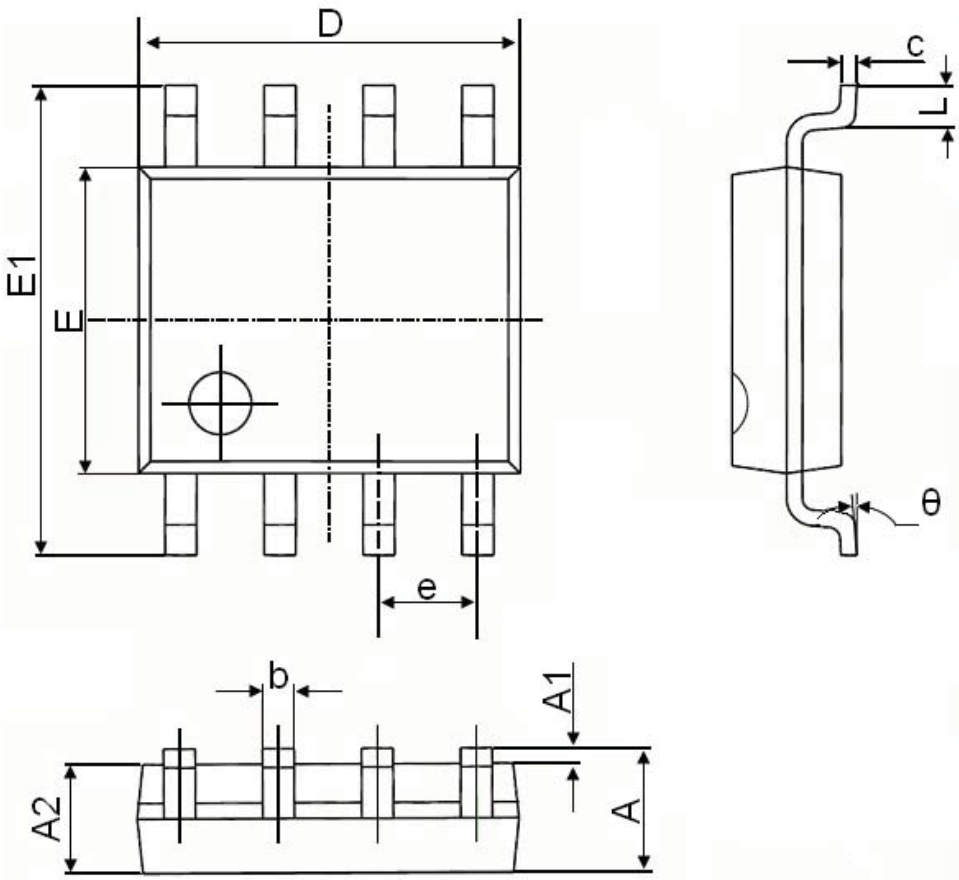
Figure 12 Source- Drain Diode Forward

## RATING AND CHARACTERISTICS CURVES (RM25P30S8)



**Figure 13 Normalized Maximum Transient Thermal Impedance**

SOP-8 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270(BSC)		0.050(BSC)	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

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