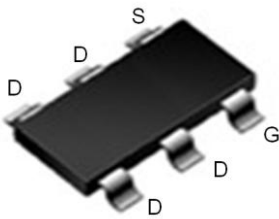


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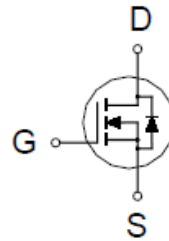
N-Channel Enhancement Mode MOSFET

PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
150V	2.6Ω @ $V_{GS} = 10V$	0.37A



SOT-23-6



ABSOLUTE MAXIMUM RATINGS ($T_A = 25\text{ °C}$ Unless Otherwise Noted)

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	150	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current	$T_A = 25\text{ °C}$	I_D	0.37	A
	$T_A = 70\text{ °C}$		0.29	
Pulsed Drain Current ¹		I_{DM}	2.2	
Power Dissipation	$T_A = 25\text{ °C}$	P_D	0.83	W
	$T_A = 70\text{ °C}$		0.53	
Junction & Storage Temperature Range		T_J, T_{STG}	-55 to 150	°C

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Ambient	$R_{\theta JA}$		150	°C / W

¹ limited by maximum junction temperature.

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ELECTRICAL CHARACTERISTICS (T_J = 25 °C, Unless Otherwise Noted)

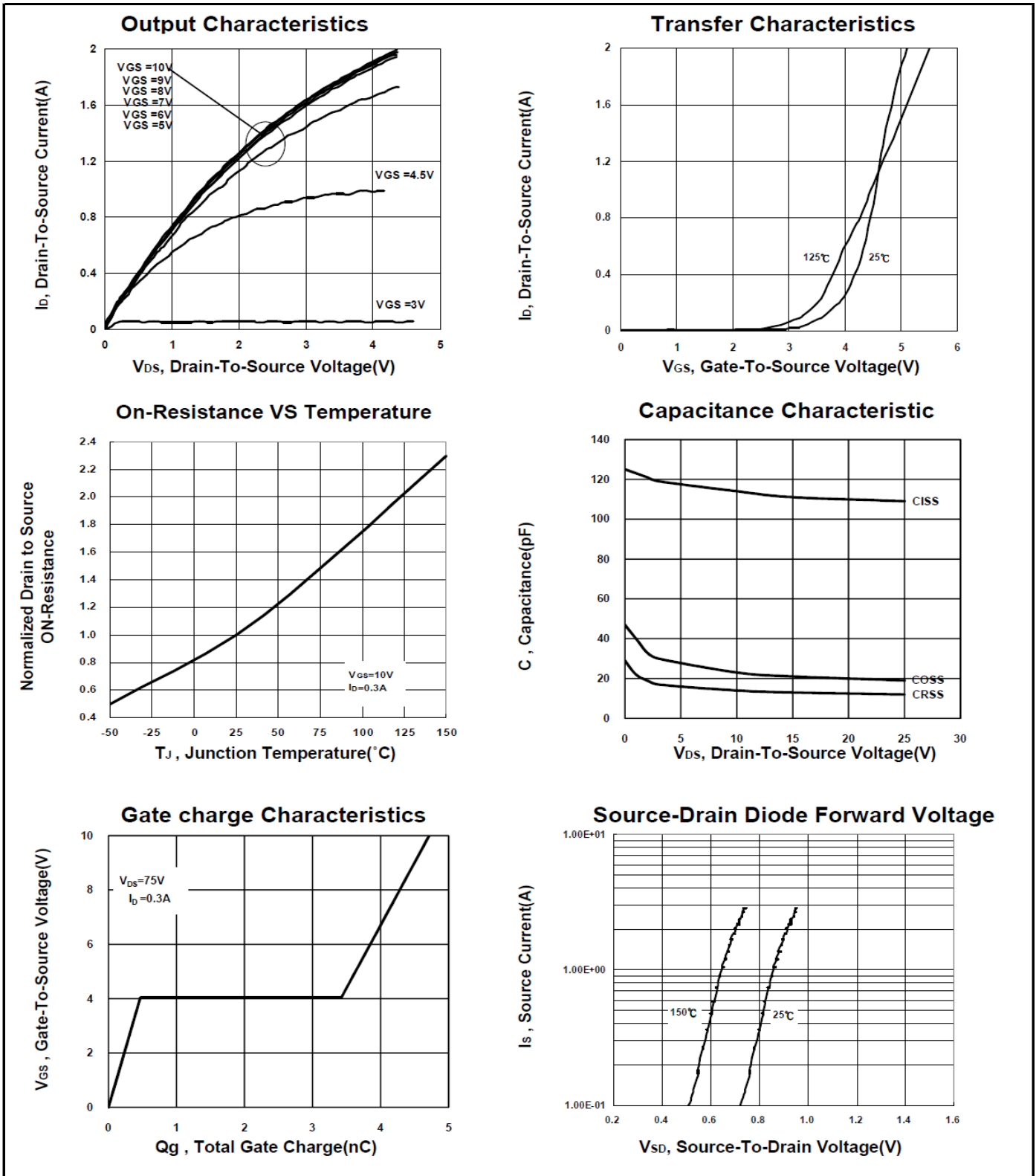
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	150			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1	2	3	V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 120V, V _{GS} = 0V			1	μA
		V _{DS} = 100V, V _{GS} = 0V, T _J = 70 °C			10	
On-State Drain Current ¹	I _{D(ON)}	V _{DS} = 5V, V _{GS} = 10V	2.2			A
Drain-Source On-State Resistance ¹	R _{DS(ON)}	V _{GS} = 10V, I _D = 0.3A		1.4	2.6	Ω
Forward Transconductance ¹	g _{fs}	V _{DS} = 5V, I _D = 0.3A		1		S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = 25V, f = 1MHz		111		pF
Output Capacitance	C _{oss}			19		
Reverse Transfer Capacitance	C _{rss}			12		
Total Gate Charge ²	Q _g	V _{DS} = 0.5V _{(BR)DSS} , V _{GS} = 10V, I _D = 0.3A		4.8		nC
Gate-Source Charge ²	Q _{gs}			0.5		
Gate-Drain Charge ²	Q _{gd}			3.5		
Turn-On Delay Time ²	t _{d(on)}	V _{DS} = 75V I _D ≅ 0.3A, V _{GS} = 10V, R _{GEN} = 6Ω		14		nS
Rise Time ²	t _r			12.6		
Turn-Off Delay Time ²	t _{d(off)}			104		
Fall Time ²	t _f			52		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTIC (T_J = 25 °C)						
Continuous Current	I _S				0.37	A
Forward Voltage ¹	V _{SD}	I _F = 1.3A, V _{GS} = 0V			1.5	V
Reverse Recovery Time	t _{rr}	I _F = 2A, dI _F /dt=100A/μS		48		nS
Reverse Recovery Charge	Q _{rr}				50	

¹Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

²Independent of operating temperature.

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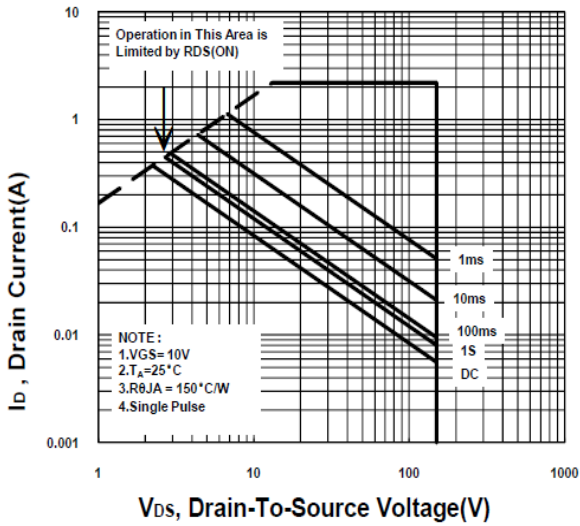
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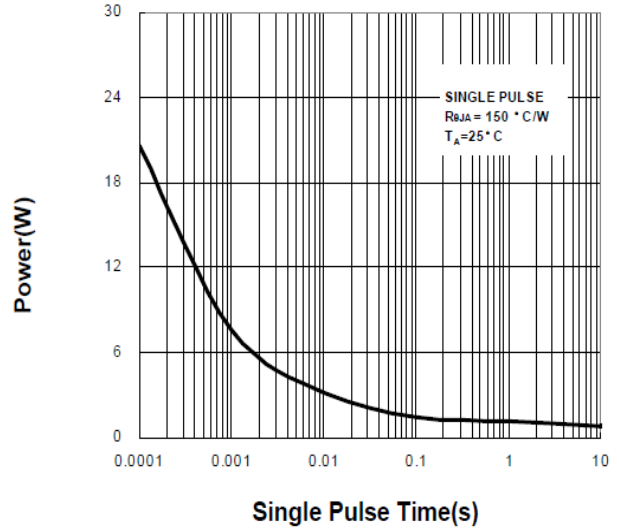
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N-Channel Enhancement Mode MOSFET

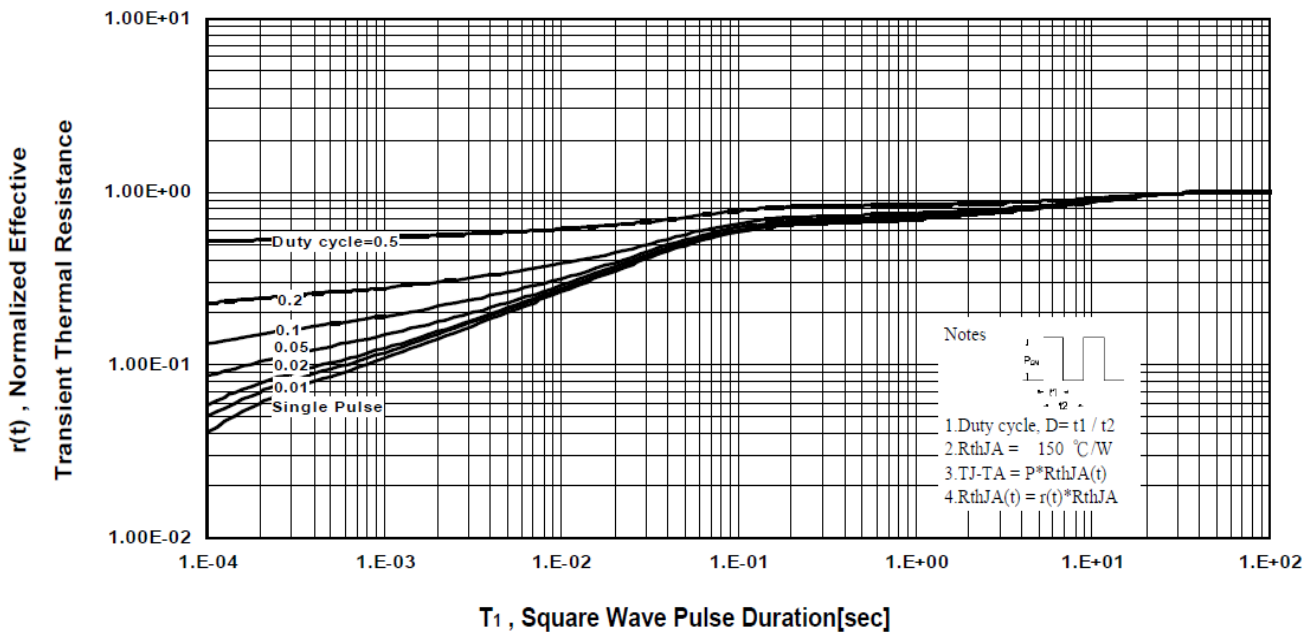
Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve



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Package Dimension

SOT-23-6 MECHANICAL DATA

Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	0.9	1.07	1.15	H	2.6	2.8	3.0
B	0.3	0.4	0.5	I	0		0.1
C	0.1	0.15	0.25				
D	2.8	2.9	3.1				
E	1.4	1.6	1.7				
F	1.8		2.0				
G	0.3	0.45	0.6				

