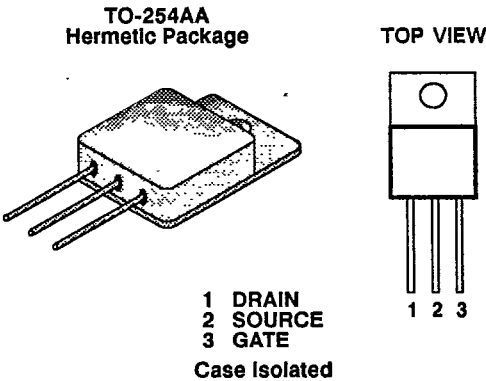


PRODUCT SUMMARY

$V_{(BR)DSS}$ (V)	$r_{DS(ON)}$ (Ω)	I_D (A)
200	0.20	16



ABSOLUTE MAXIMUM RATINGS ($T_C = 25^{\circ}\text{C}$ Unless Otherwise Noted)

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	200	V
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current	$T_C = 25^{\circ}\text{C}$	I_D	16	A
	$T_C = 100^{\circ}\text{C}$		10	
Pulsed Drain Current ¹		I_{DM}	64	
Power Dissipation	$T_C = 25^{\circ}\text{C}$	P_D	100	W
	$T_C = 100^{\circ}\text{C}$		40	
Operating Junction & Storage Temperature Range		T_J, T_{stg}	-55 to 150	$^{\circ}\text{C}$
Lead Temperature ($1/16"$ from case for 10 sec.)		T_L	300	

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THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Case	R_{thJC}		1.25	K/W
Junction-to-Ambient	R_{thJA}		50	
Case-to-Sink	R_{thCS}	0.2		

¹Pulse width limited by maximum junction temperature (refer to transient thermal impedance data, Figure 11).

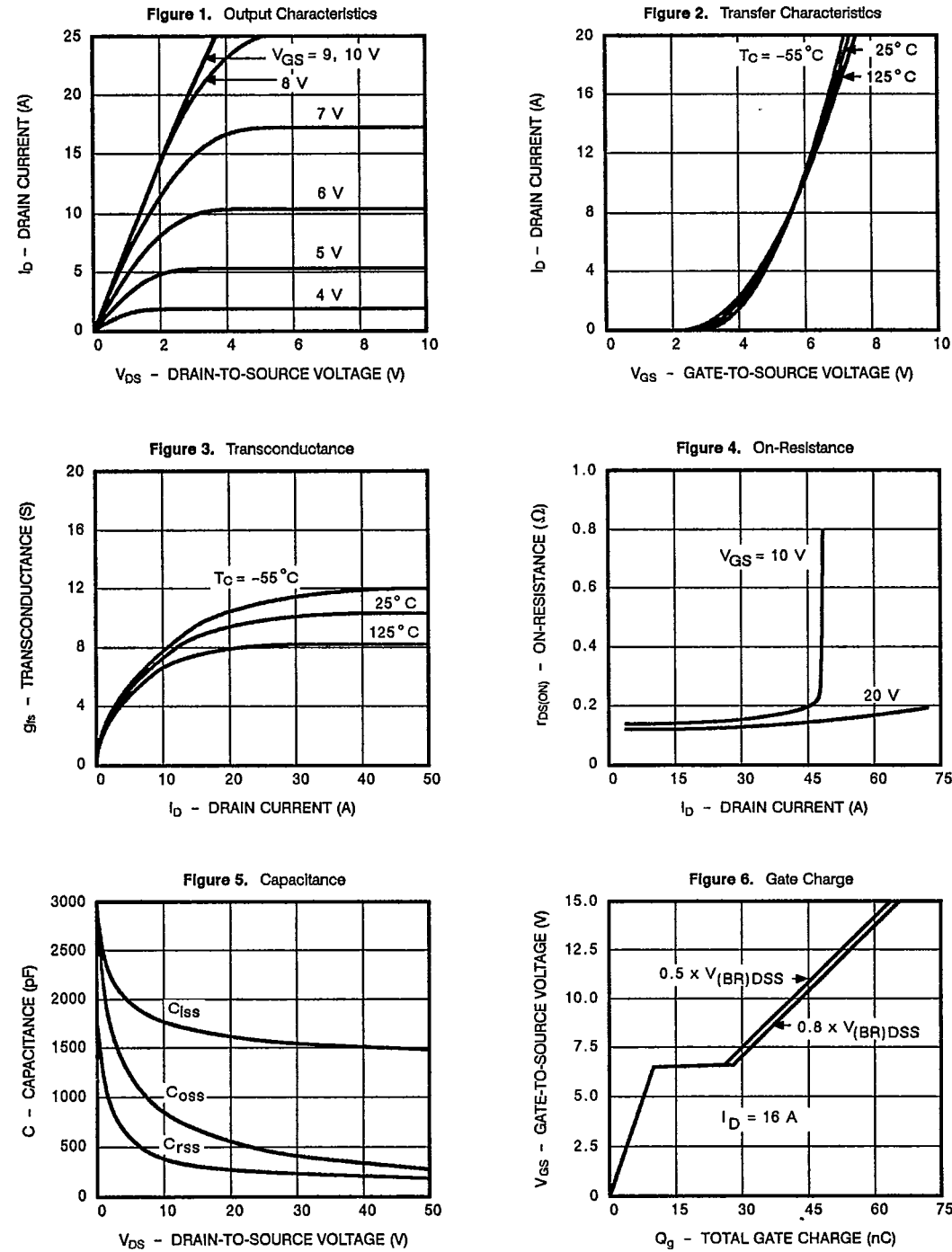
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ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$ Unless Otherwise Noted)

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PARAMETER	SYMBOL	TEST CONDITIONS	TYP	LIMITS		UNIT
				MIN	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{ V}, I_D = 250\text{ }\mu\text{A}$		200		V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\text{ }\mu\text{A}$		2.0	4.0	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0\text{ V}, V_{GS} = \pm 20\text{ V}$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 160\text{ V}, V_{GS} = 0\text{ V}$			25	μA
		$V_{DS} = 160\text{ V}, V_{GS} = 0\text{ V}, T_J = 125^\circ\text{C}$			250	
On-State Drain Current ¹	$I_{D(ON)}$	$V_{DS} = 5\text{ V}, V_{GS} = 10\text{ V}$		16		A
Drain-Source On-State Resistance ¹	$r_{DS(ON)}$	$V_{GS} = 10\text{ V}, I_D = 10\text{ A}$	0.14		0.20	Ω
		$V_{GS} = 10\text{ V}, I_D = 10\text{ A}, T_J = 125^\circ\text{C}$	0.26		0.36	
Forward Transconductance ¹	g_{fs}	$V_{DS} = 15\text{ V}, I_D = 10\text{ A}$	8.0	6.0	18	S
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0\text{ V}, V_{DS} = 25\text{ V}, f = 1\text{ MHz}$	1550			pF
Output Capacitance	C_{oss}		500			
Reverse Transfer Capacitance	C_{rss}		220			
Total Gate Charge ²	Q_g	$V_{DS} = 0.5 \times V_{(BR)DSS}, V_{GS} = 10\text{ V}, I_D = 16\text{ A}$	42	30	77	nC
Gate-Source Charge ²	Q_{gs}		9	4.6	13	
Gate-Drain Charge ²	Q_{gd}		22	13	35	
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DD} = 100\text{ V}, R_L = 6.25\text{ }\Omega$ $I_D \approx 16\text{ A}, V_{GEN} = 10\text{ V}, R_G = 4.7\text{ }\Omega$	15		30	ns
Rise Time ²	t_r		60		120	
Turn-Off Delay Time ²	$t_{d(off)}$		40		80	
Fall Time ²	t_f		20		60	
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS						
Continuous Current	I_S				16	A
Pulsed Current ³	I_{SM}				64	
Forward Voltage ¹	V_{SD}	$I_F = I_S, V_{GS} = 0\text{ V}$		0.6	2.0	V
Reverse Recovery Time	t_{rr}	$I_F = I_S, dI_F/dt = 100\text{ A}/\mu\text{s}$	150		300	ns
Reverse Recovery Charge	Q_{rr}		0.5			μC

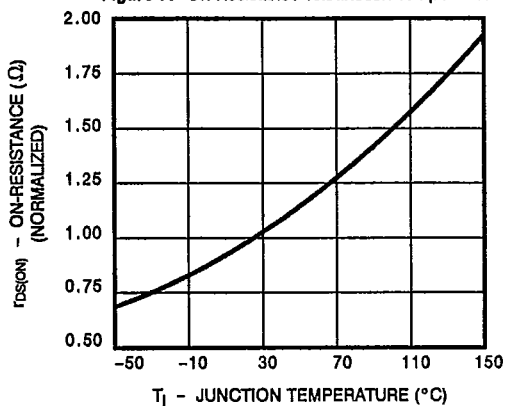
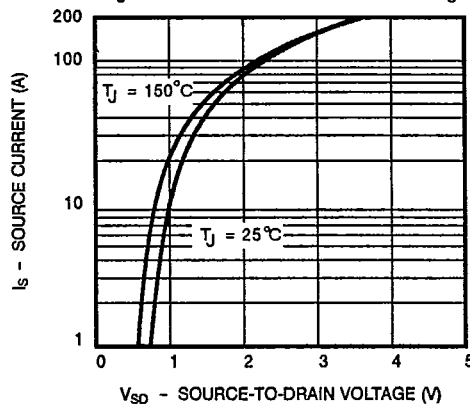
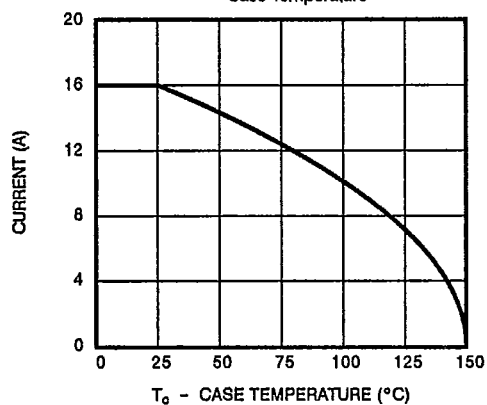
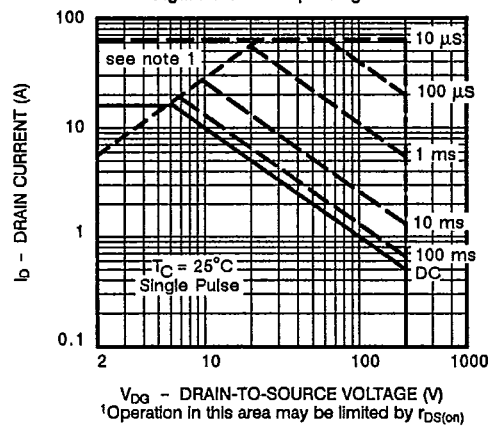
¹Pulse test: Pulse Width $\leq 300\text{ }\mu\text{sec}$, Duty Cycle $\leq 2\%$.²Independent of operating temperature.³Pulse width limited by maximum junction temperature (refer to transient thermal impedance data, Figure 11).



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2N7072**TYPICAL CHARACTERISTICS (Cont'd)**

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Figure 7. On-Resistance vs. Junction Temperature**Figure 8. Source-Drain Diode Forward Voltage****THERMAL RATINGS****Figure 9. Maximum Drain Current vs. Case Temperature****Figure 10. Safe Operating Area****Figure 11. Normalized Effective Transient Thermal Impedance, Junction-to-Case**