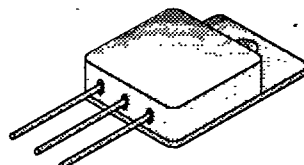
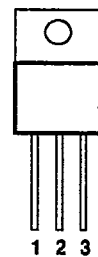


TO-254AA
Hermetic Package

TOP VIEW



1 DRAIN
2 SOURCE
3 GATE
Case Isolated

PRODUCT SUMMARY

$V_{(BR)DSS}$ (V)	$r_{DS(ON)}$ (Ω)	I_D (A)
400	0.55	9.0

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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	400	V
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current	$T_C = 25^\circ\text{C}$	I_D	9.0	A
	$T_C = 100^\circ\text{C}$		5.5	
Pulsed Drain Current ¹		I_{DM}	36	
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	

4**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°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 V, I _D = 250 μA		400		V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250 μA		2.0	4.0	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±20 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 320 V, V _{GS} = 0 V			25	μA
		V _{DS} = 320 V, V _{GS} = 0 V, T _J = 125°C			250	
On-State Drain Current ¹	I _{D(ON)}	V _{DS} = 10 V, V _{GS} = 10 V		9.0		A
Drain-Source On-State Resistance ¹	r _{DS(ON)}	V _{GS} = 10 V, I _D = 5.5 A	0.45		0.55	Ω
		V _{GS} = 10 V, I _D = 5.5 A, T _J = 125°C	0.90		1.1	
Forward Transconductance ¹	g _{fs}	V _{DS} = 15 V, I _D = 5.5 A	4.8	4.0	12	S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0 V, V _{DS} = 25 V, f = 1 MHz	1500			pF
Output Capacitance	C _{oss}		300			
Reverse Transfer Capacitance	C _{rss}		120			
Total Gate Charge ²	Q _g	V _{DS} = 0.5 × V _{(BR)DSS} , V _{GS} = 10 V, I _D = 9 A	58	30	77	nC
Gate-Source Charge ²	Q _{gs}		10	4.6	13	
Gate-Drain Charge ²	Q _{gd}		27	13	35	
Turn-On Delay Time ²	t _{d(on)}	V _{DD} = 200 V, R _L = 22 Ω I _D ≈ 9 A, V _{GEN} = 10 V, R _G = 4.7 Ω	16		40	ns
Rise Time ²	t _r		28		60	
Turn-Off Delay Time ²	t _{d(off)}		54		110	
Fall Time ²	t _f		30		60	
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS						
Continuous Current	I _S				9.0	A
Pulsed Current ³	I _{SM}				36	
Forward Voltage ¹	V _{SD}	I _F = I _S , V _{GS} = 0 V		0.6	2.0	V
Reverse Recovery Time	t _{rr}	I _F = I _S , dI _F /dt = 100 A/μs	250		500	ns
Reverse Recovery Charge	Q _{rr}		1.0			μC

¹Pulse test: Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.²Independent of operating temperature.³Pulse width limited by maximum junction temperature (refer to transient thermal impedance data, Figure 11).



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TYPICAL CHARACTERISTICS (25°C Unless Otherwise Specified)

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[查询“2N7073”供应商](#)

Figure 1. Output Characteristics

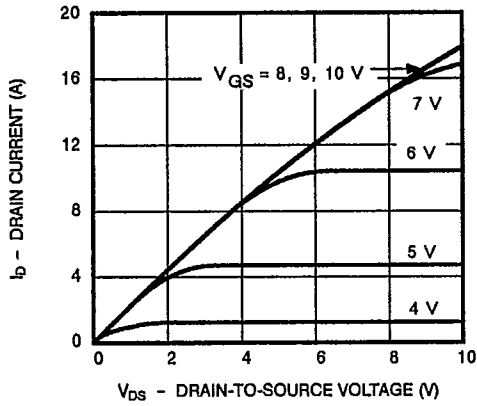


Figure 2. Transfer Characteristics

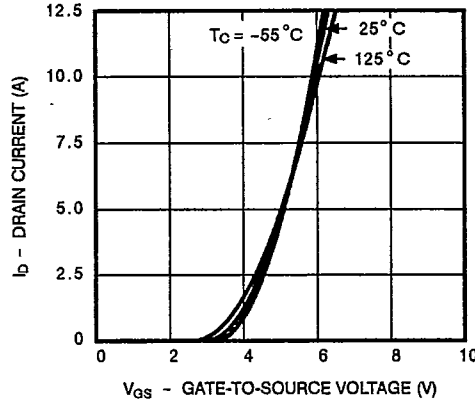


Figure 3. Transconductance

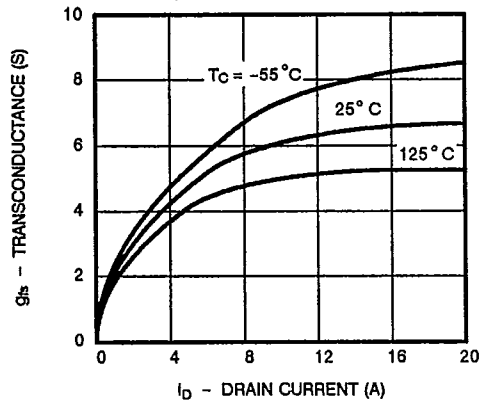
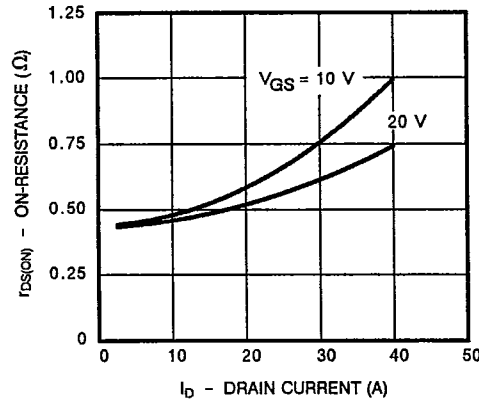


Figure 4. On-Resistance



4

Figure 5. Capacitance

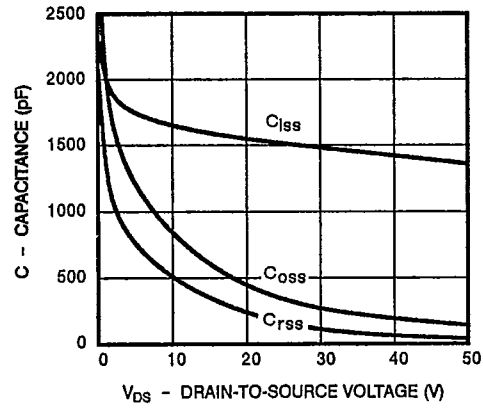
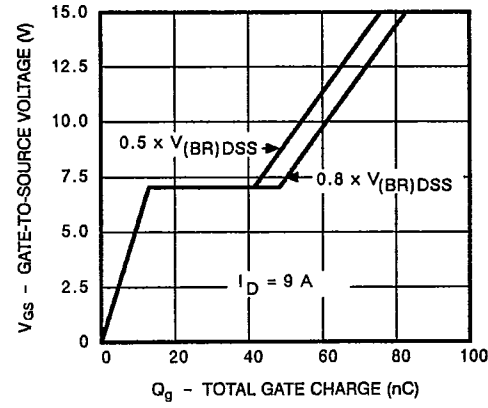
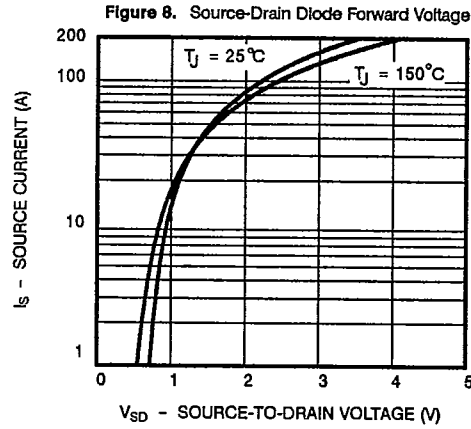
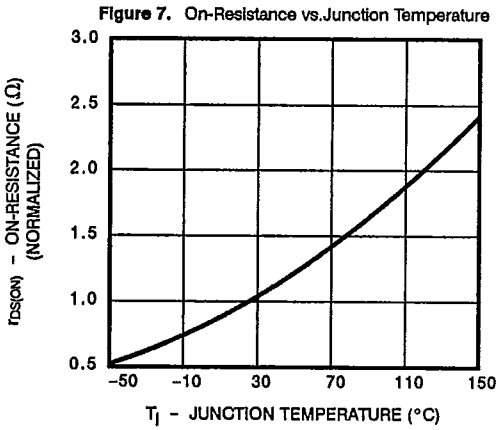


Figure 6. Gate Charge



TYPICAL CHARACTERISTICS (Cont'd)

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THERMAL RATINGS

