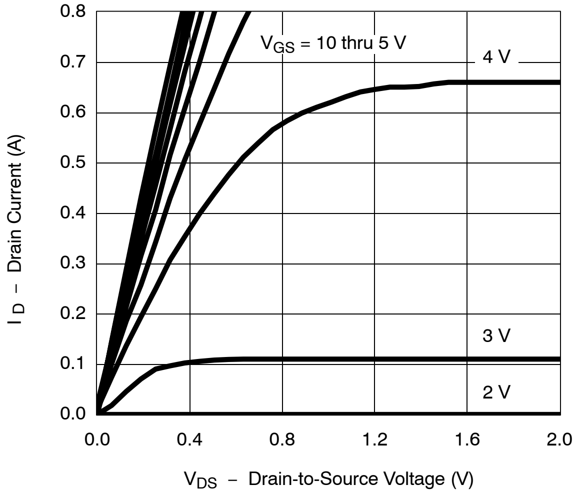
SPECIFICATIONS (T_A = 25°C UNLESS OTHERWISE NOTED)

Parameter	Symbol	Test Conditions	Limits Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0 V, I_D = 10 µA	20			V
Gate-Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, I_D = 0.25 mA	1.0	2.0	3.0	
Gate-Body Leakage	I_{GSS}	V_{DS} = 0 V, V_{GS} = ±20 V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 20 V, V_{GS} = 0 V			1	µA
		V_{DS} = 20 V, V_{GS} = 0 V, T_J = 55°C			10	
On-State Drain Current[a]	$I_{D(on)}$	V_{DS} = 10 V, V_{GS} = 10 V — TN0201K	0.5			A
		V_{DS} = 10 V, V_{GS} = 10 V — TN0201KL	0.8			
Drain-Source On-Resistance[a]	$r_{DS(on)}$	V_{GS} = 4.5 V, I_D = 0.1 A		0.8	1.4	Ω
		V_{GS} = 10 V, I_D = 0.3 A		0.47	1.0	
Forward Transconductance[a]	g_{fs}	V_{DS} = 10 V, I_D = 0.3 A		550		mS
Diode Forward Voltage	V_{SD}	I_S = 0.3 A, V_{GS} = 0 V		0.85	1.2	V
Dynamic[b]						
Total Gate Charge	Q_g	V_{DS} = 16 V, V_{GS} = 10 V I_D ≅ 0.3 A		1000	1500	pC
Gate-Source Charge	Q_{gs}			205		
Gate-Drain Charge	Q_{gd}			200		
Gate Resistance	R_g			48		Ω
Turn-On Time	$t_{d(on)}$	V_{DD} = 15 V, R_L = 50 Ω I_D ≅ 0.3 A, V_{GEN} = 10 V R_G = 6 Ω		4.5	8	ns
	t_r			8	15	
Turn-Off Time	$t_{d(off)}$			9	15	
	t_f			6.3	12	

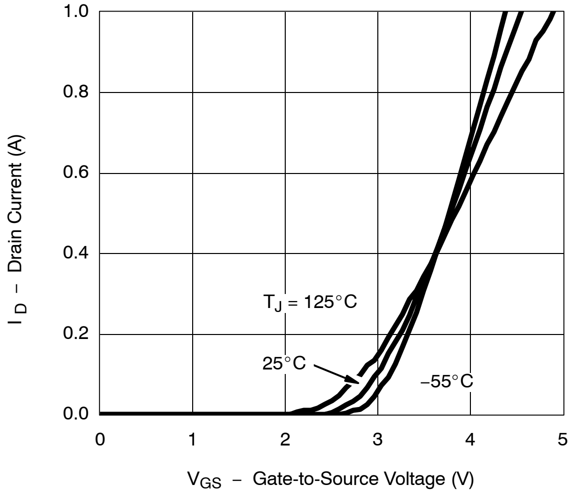
Notes
a. Pulse test: PW ≤300 µs duty cycle ≤2%.
b. Guaranteed by design, not subject to production testing.

TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

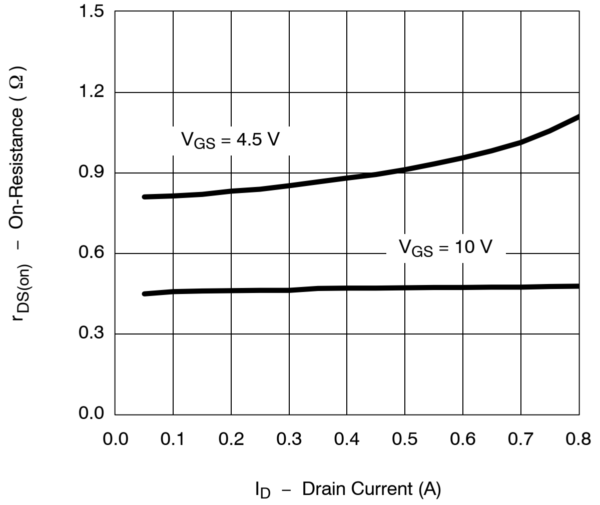
Output Characteristics

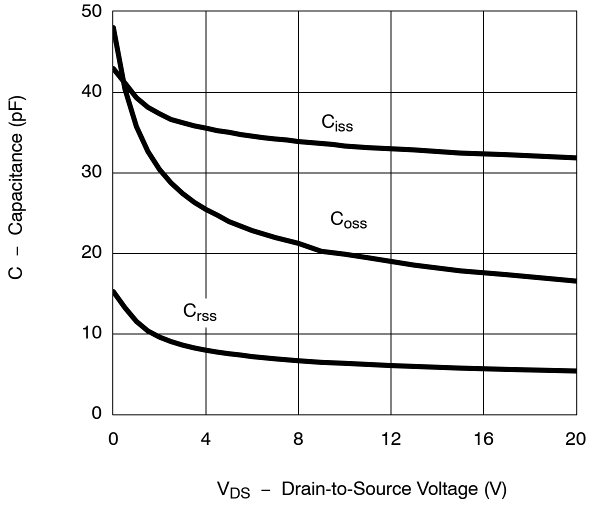


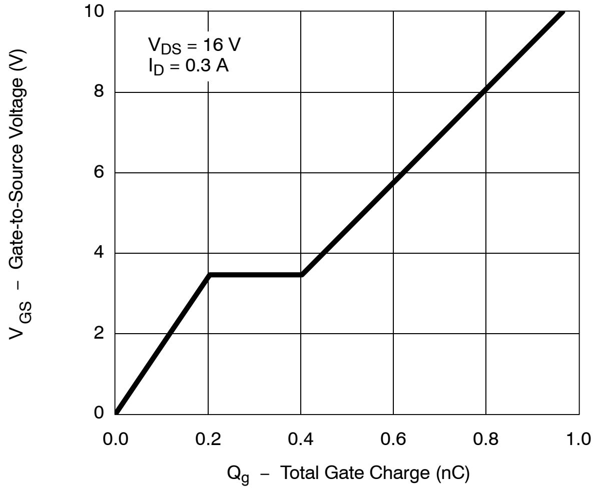
Transfer Characteristics

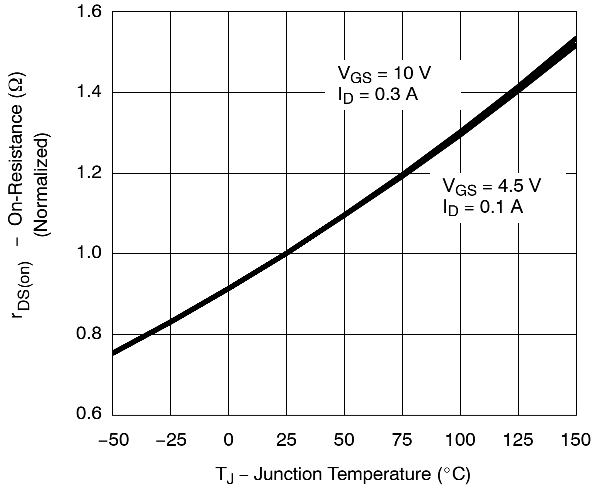


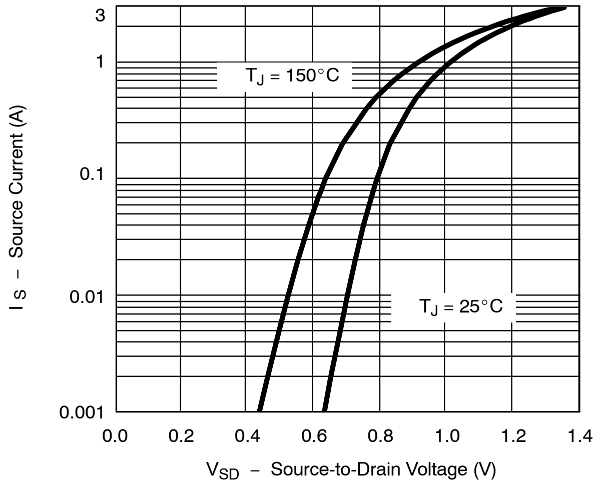
TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

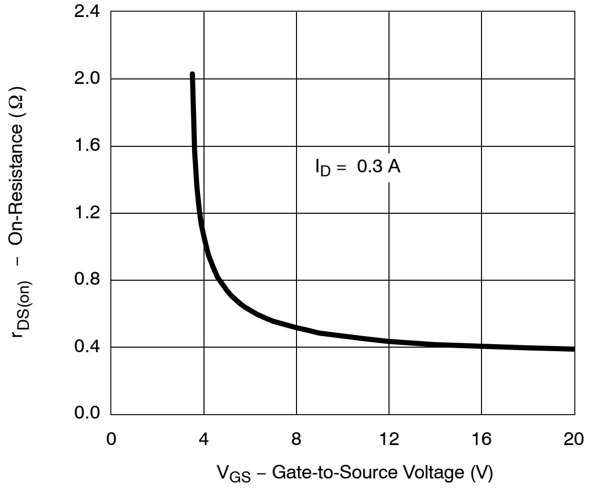

On-Resistance vs. Drain Current


Capacitance

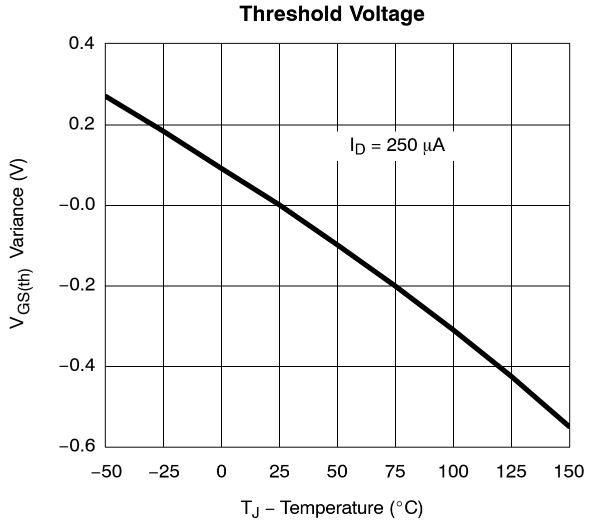

Gate Charge

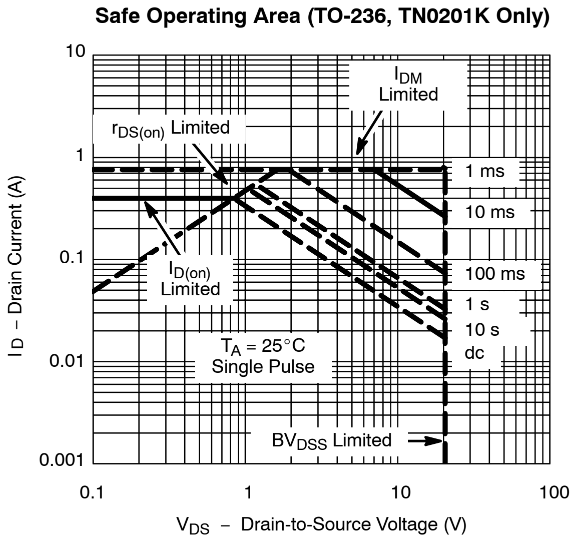

On-Resistance vs. Junction Temperature

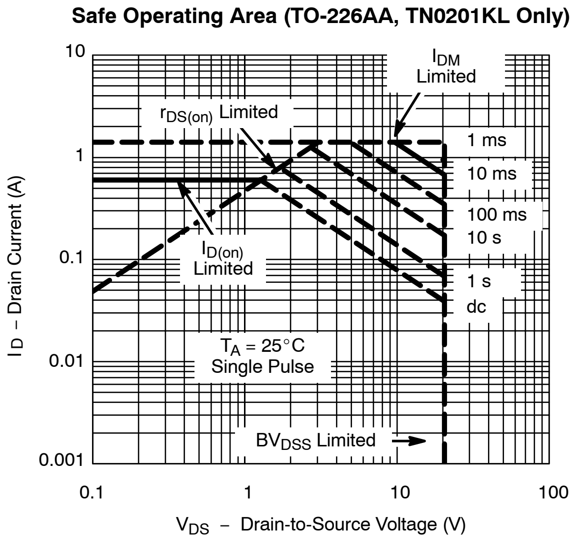

Source-Drain Diode Forward Voltage

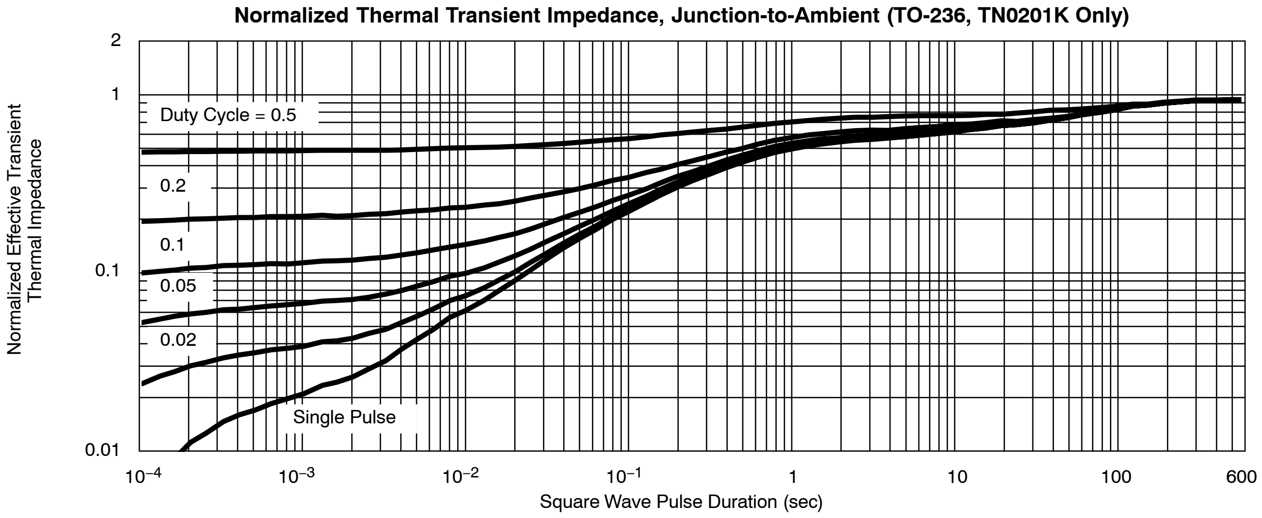

On-Resistance vs. Gate-to-Source Voltage

TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)



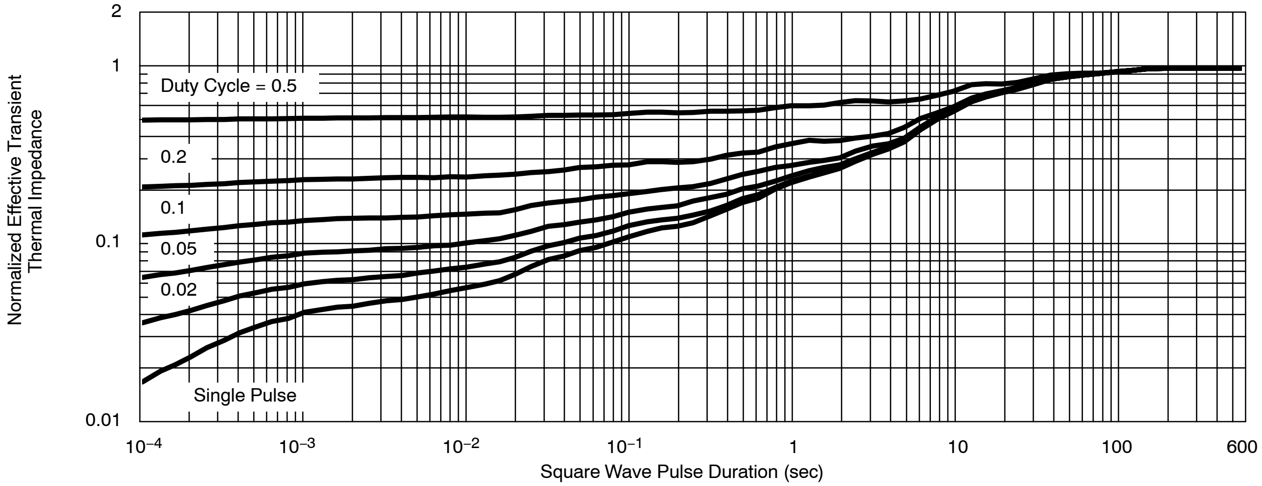






TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

Normalized Thermal Transient Impedance, Junction-to-Ambient (TO-226AA, TN0201KL Only)



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