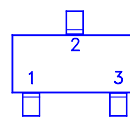
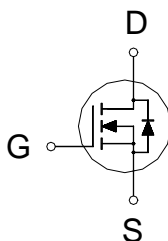


PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
20	75m	3A



- 1. GATE
- 2. DRAIN
- 3. SOURCE

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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Gate-Source Voltage		V_{GS}	± 12	V
Continuous Drain Current	$T_C = 25\text{ }^\circ\text{C}$	I_D	3	A
	$T_C = 100\text{ }^\circ\text{C}$		2	
Pulsed Drain Current ¹		I_{DM}	20	
Power Dissipation	$T_C = 25\text{ }^\circ\text{C}$	P_D	0.6	W
	$T_C = 100\text{ }^\circ\text{C}$		0.5	
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	275	

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Case	$R_{\theta JC}$		65	$^\circ\text{C} / \text{W}$
Junction-to-Ambient	$R_{\theta JA}$		230	

¹Pulse width limited by maximum junction temperature.

²Duty cycle $\leq 1\%$

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

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu\text{A}$	20			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	0.45	0.75	1.2	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 12V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 16V, V_{GS} = 0V$			1	μA
		$V_{DS} = 16V, V_{GS} = 0V, T_J = 125\text{ }^\circ\text{C}$			10	
On-State Drain Current ¹	$I_{D(ON)}$	$V_{DS} = 10V, V_{GS} = 10V$	3			A
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 2.5V, I_D = 1.5A$		70	105	m
		$V_{GS} = 4.5V, I_D = 3A$		50	75	
Forward Transconductance ¹	g_{fs}	$V_{DS} = 15V, I_D = 3A$		16		S

DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 15V, f = 1MHz$		450		pF
Output Capacitance	C_{oss}			200		
Reverse Transfer Capacitance	C_{rss}			60		
Total Gate Charge ²	Q_g	$V_{DS} = 0.5V_{(BR)DSS}, V_{GS} = 10V,$ $I_D = 3A$		15		nC
Gate-Source Charge ²	Q_{gs}			2.0		
Gate-Drain Charge ²	Q_{gd}			7.0		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DS} = 15V,$ $I_D \cong 1A, V_{GS} = 10V, R_{GS} = 2.5$		6.0		nS
Rise Time ²	t_r			6.0		
Turn-Off Delay Time ²	$t_{d(off)}$			20		
Fall Time ²	t_f			5.0		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_C = 25^\circ C$)						
Continuous Current	I_S			2.3		A
Pulsed Current ³	I_{SM}			4.6		
Forward Voltage ¹	V_{SD}	$I_F = I_S, V_{GS} = 0V$			1.5	V

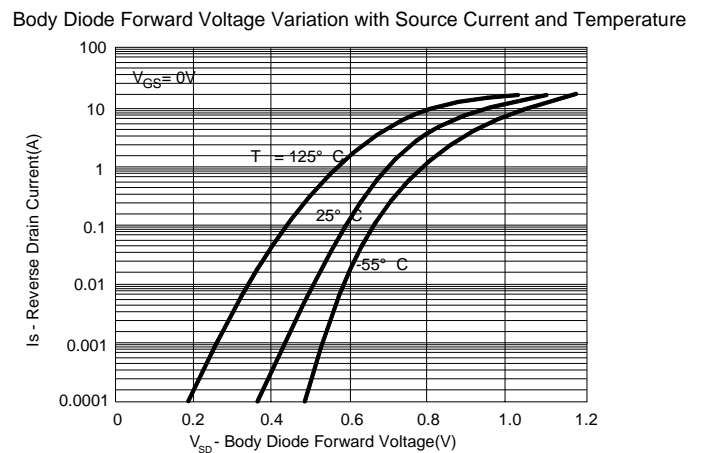
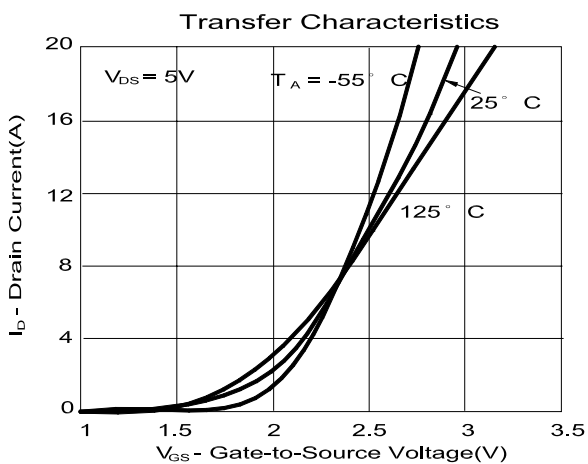
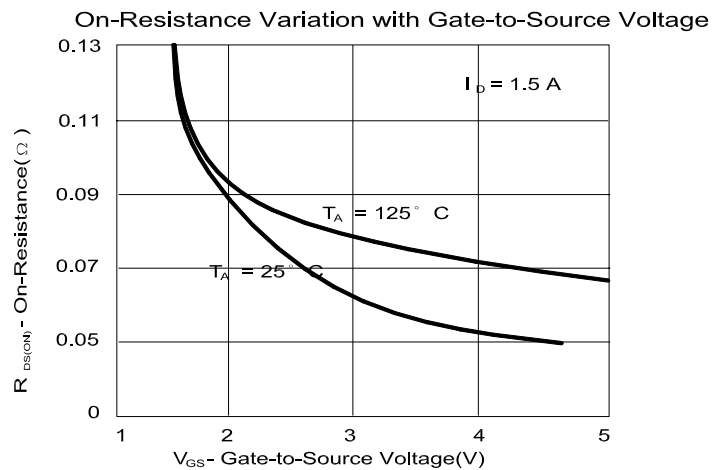
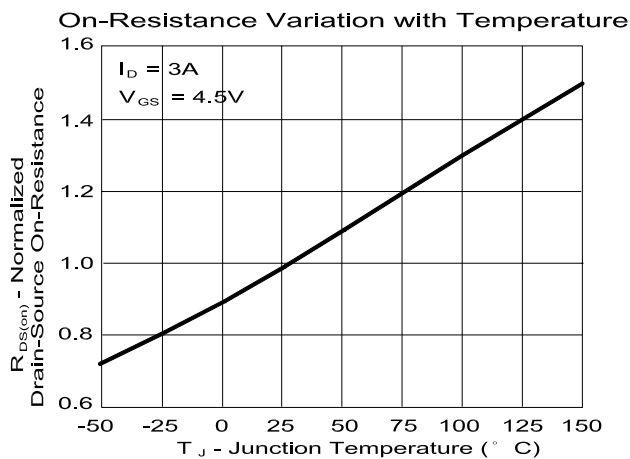
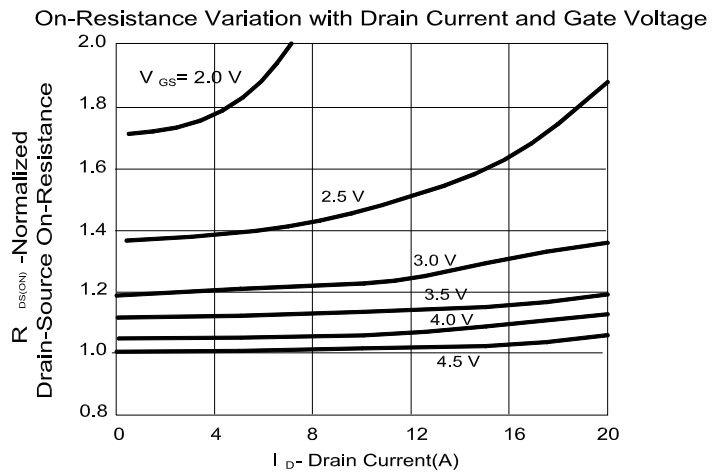
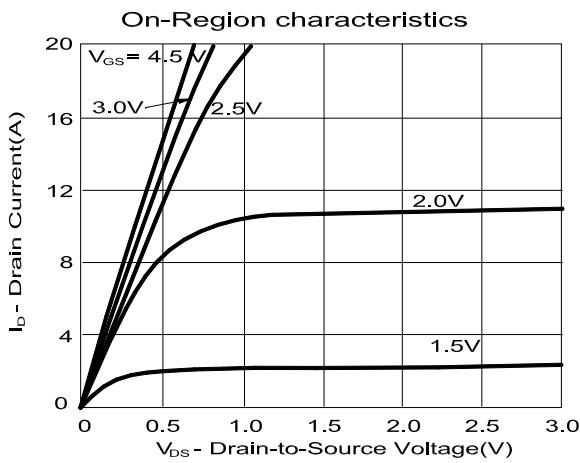
¹Pulse test : Pulse Width $\leq 300 \mu sec$, Duty Cycle $\leq 2\%$.

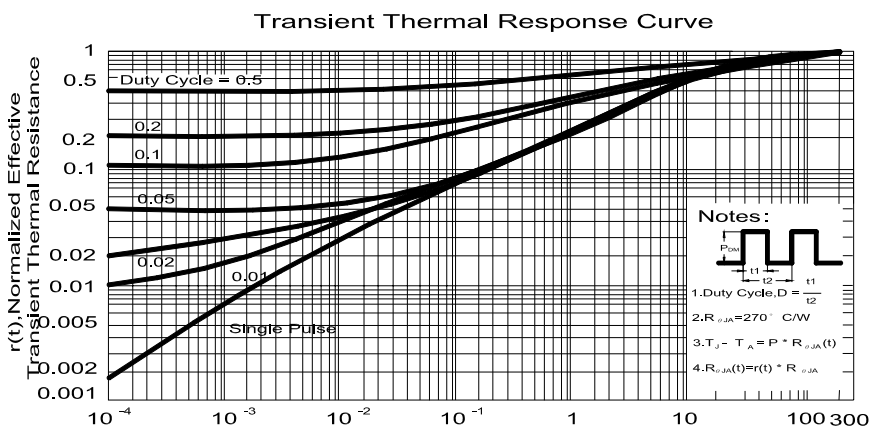
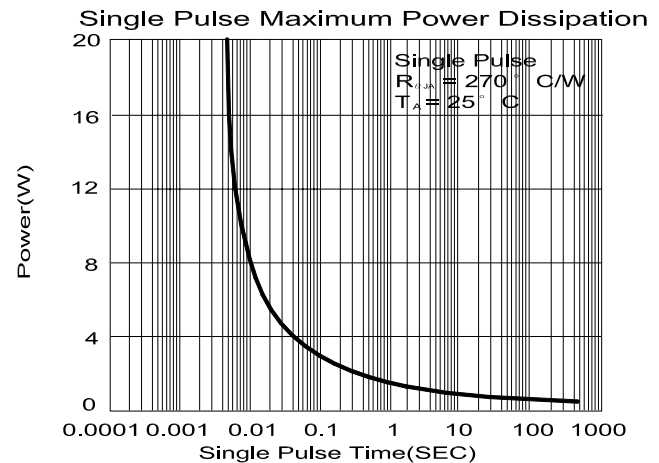
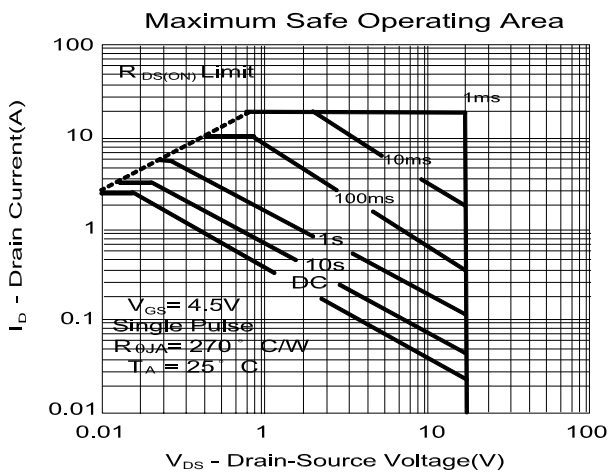
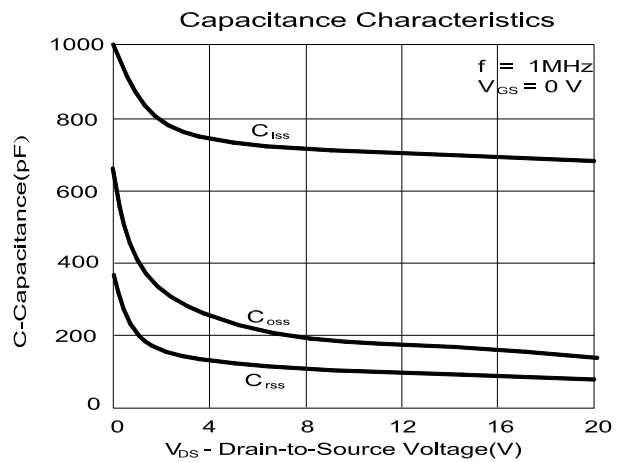
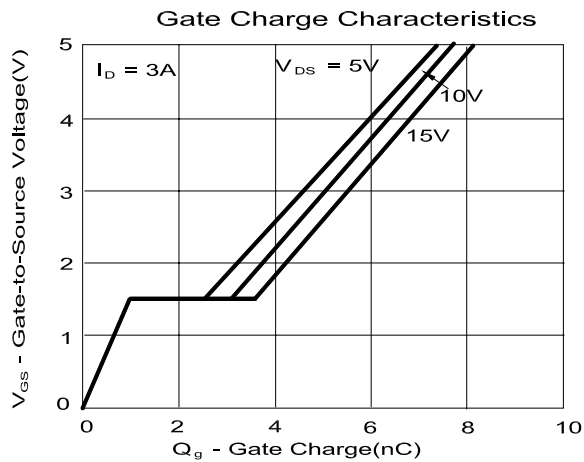
²Independent of operating temperature.

³Pulse width limited by maximum junction temperature.

REMARK: THE PRODUCT MARKED WITH “11YWW”, DATE CODE or LOT #

Orders for parts with Lead-Free plating can be placed using the PXXXXXXG parts name





SOT-23 (M3) MECHANICAL DATA

Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A		0.95		H	0.10	0.15	0.25
B	2.60	2.80	3.00	I	0.37		
C	1.40	1.60	1.80	J			
D	2.70	2.90	3.10	K			
E	1.00	1.10	1.30	L			
F	0.00		0.10	M			
G	0.35	0.4	0.5	N			

