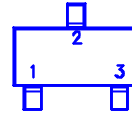
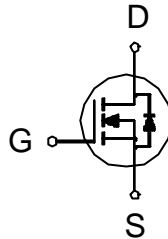


**PRODUCT SUMMARY**

$V_{(BR)DSS}$	$R_{DS(ON)}$	$I_D$
25	85m	3A



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

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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Gate-Source Voltage		$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$T_C = 25\text{ °C}$	$I_D$	3	A
	$T_C = 100\text{ °C}$		2	
Pulsed Drain Current <sup>1</sup>		$I_{DM}$	20	
Power Dissipation	$T_C = 25\text{ °C}$	$P_D$	0.6	W
	$T_C = 100\text{ °C}$		0.5	
Operating Junction & Storage Temperature Range		$T_j, T_{stg}$	-55 to 150	°C
Lead Temperature ( <sup>1</sup> / <sub>16</sub> " from case for 10 sec.)		$T_L$	275	

**THERMAL RESISTANCE RATINGS**

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

<sup>1</sup>Pulse width limited by maximum junction temperature.

<sup>2</sup>Duty cycle  $\leq 1\%$

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

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
<b>STATIC</b>						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	25			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.8	1.2	2.5	
Gate-Body Leakage	$I_{GSS}$	$V_{DS} = 0V, V_{GS} = \pm 20V$			$\pm 100$	nA
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 20V, V_{GS} = 0V$			1	$\mu A$
		$V_{DS} = 20V, V_{GS} = 0V, T_J = 125\text{ °C}$			10	
On-State Drain Current <sup>1</sup>	$I_{D(ON)}$	$V_{DS} = 10V, V_{GS} = 10V$	3			A
Drain-Source On-State Resistance <sup>1</sup>	$R_{DS(ON)}$	$V_{GS} = 4.5V, I_D = 1.5A$		70	115	m
		$V_{GS} = 10V, I_D = 3A$		48	85	

Forward Transconductance <sup>1</sup>	$g_{fs}$	$V_{DS} = 15V, I_D = 3A$		16		S
<b>DYNAMIC</b>						
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 <sup>2</sup>	$Q_g$	$V_{DS} = 0.5V_{(BR)DSS}, V_{GS} = 10V,$ $I_D = 3A$		15		nC
Gate-Source Charge <sup>2</sup>	$Q_{gs}$			2.0		
Gate-Drain Charge <sup>2</sup>	$Q_{gd}$			7.0		
Turn-On Delay Time <sup>2</sup>	$t_{d(on)}$	$V_{DS} = 15V, R_L = 1$ $I_D \cong 3A, V_{GS} = 10V, R_{GS} = 2.5$		6.0		nS
Rise Time <sup>2</sup>	$t_r$			6.0		
Turn-Off Delay Time <sup>2</sup>	$t_{d(off)}$			20		
Fall Time <sup>2</sup>	$t_f$			5.0		
<b>SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (<math>T_c = 25^\circ C</math>)</b>						
Continuous Current	$I_S$				2.3	A
Pulsed Current <sup>3</sup>	$I_{SM}$				4.6	
Forward Voltage <sup>1</sup>	$V_{SD}$	$I_F = I_S, V_{GS} = 0V$			1.5	V

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

<sup>2</sup>Independent of operating temperature.

<sup>3</sup>Pulse width limited by maximum junction temperature.

**REMARK: THE PRODUCT MARKED WITH “10YWW”, 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	0.85		1.15	H	0.1	0.15	0.25
B	2.4		3	I	0.37		
C	1.4	1.6	1.8	J			
D	2.7	2.9	3.1	K			
E	1	1.1	1.3	L			
F	0		0.1	M			
G	0.35		0.5	N			

