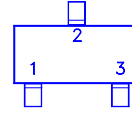
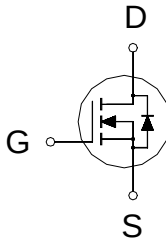


PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
25V	180m Ω	1.2A



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}	± 15	V
Continuous Drain Current	$T_C = 25\text{ }^\circ\text{C}$	I_D	1.2	A
	$T_C = 100\text{ }^\circ\text{C}$		1.0	
Pulsed Drain Current ¹		I_{DM}	12	
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.

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	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\text{ }\mu A$	25			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\text{ }\mu A$	0.7	1.0	2.5	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 15V$			± 250	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 20V, V_{GS} = 0V$			25	μA
		$V_{DS} = 20V, V_{GS} = 0V, T_J = 125\text{ }^{\circ}C$			250	
On-State Drain Current ¹	$I_{D(ON)}$	$V_{DS} = 10V, V_{GS} = 10V$	1.2			A
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 7V, I_D = 1.2A$		220	250	mΩ
		$V_{GS} = 10V, I_D = 1.2A$		180	220	
Forward Transconductance ¹	g_{fs}	$V_{DS} = 20V, I_D = 1.2A$		16		S

DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = 15V, f = 1MHz		120		pF
Output Capacitance	C _{oss}			100		
Reverse Transfer Capacitance	C _{rss}			85		
Total Gate Charge ²	Q _g	V _{DS} = 0.5V _{(BR)DSS} , V _{GS} = 10V, I _D = 1A		11		nC
Gate-Source Charge ²	Q _{gs}			3.0		
Gate-Drain Charge ²	Q _{gd}			5.8		
Turn-On Delay Time ²	t _{d(on)}	V _{DS} = 15V, R _L = 1Ω I _D ≅ 1A, V _{GS} = 10V, R _{GS} = 50Ω		7		nS
Rise Time ²	t _r			20		
Turn-Off Delay Time ²	t _{d(off)}			13		
Fall Time ²	t _f			19		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T _c = 25 °C)						
Continuous Current	I _S			1.2		A
Pulsed Current ³	I _{SM}			12		
Forward Voltage ¹	V _{SD}	I _F = I _S , V _{GS} = 0V			1.3	V
Reverse Recovery Time	t _{rr}	I _F = I _S , dI _F /dt = 100A / μS		70		nS
Reverse Recovery Charge	Q _{rr}			0.22		μC

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 "102B"

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	0.40	0.50	N			

