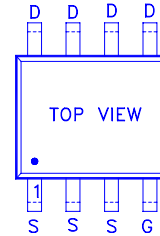
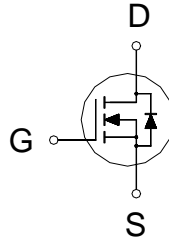


PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
30	11m	11A



G : GATE
D : DRAIN
S : SOURCE

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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	30	V
Gate-Source Voltage		V_{GS}	± 20	V
Continuous Drain Current	$T_C = 25\text{ }^\circ\text{C}$	I_D	11	A
	$T_C = 90\text{ }^\circ\text{C}$		12	
Pulsed Drain Current ¹		I_{DM}	100	
Power Dissipation	$T_C = 25\text{ }^\circ\text{C}$	P_D	2.5	W
	$T_C = 90\text{ }^\circ\text{C}$		3.0	
Junction & Storage Temperature Range		T_j, T_{stg}	-55 to 150	$^\circ\text{C}$

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Ambient	$R_{\theta JA}$		50	$^\circ\text{C} / \text{W}$

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	$V_{(BR)DSS}$	$V_{GS} = 0\text{V}, I_D = 250\mu\text{A}$	30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	1	1.5	2.5	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0\text{V}, V_{GS} = \pm 20\text{V}$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 24\text{V}, V_{GS} = 0\text{V}$			1	μA
		$V_{DS} = 20\text{V}, V_{GS} = 0\text{V}, T_J = 55\text{ }^\circ\text{C}$			10	
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 4.5\text{V}, I_D = 10\text{A}$		13	16.5	m
		$V_{GS} = 10\text{V}, I_D = 11\text{A}$		9	11	
Forward Transconductance ¹	g_{fs}	$V_{DS} = 15\text{V}, I_D = 10\text{A}$		38		S

DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 15V, f = 1MHz$		1800		pF
Output Capacitance	C_{oss}			720		
Reverse Transfer Capacitance	C_{rss}			15		
Total Gate Charge ²	Q_g	$V_{DS} = 0.5V_{(BR)DSS}, V_{GS} = 10V, I_D = 10A$		17	26	nC
Gate-Source Charge ²	Q_{gs}			3.4		
Gate-Drain Charge ²	Q_{gd}			5.1		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DS} = 15V, R_L = 25 I_D \cong 1A, V_{GS} = 10V, R_{GEN} = 6$		8.6		nS
Rise Time ²	t_r			21		
Turn-Off Delay Time ²	$t_{d(off)}$			43		
Fall Time ²	t_f			10		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_C = 25^\circ C$)						
Continuous Current	I_S				2.5	A
Pulsed Current ³	I_{SM}				5	
Forward Voltage ¹	V_{SD}	$I_F = 1A, V_{GS} = 0V$			1.1	V
Reverse Recovery Time	t_{rr}	$I_F = 2.3A, di_F/dt = 100A / \mu S$		50	80	nS

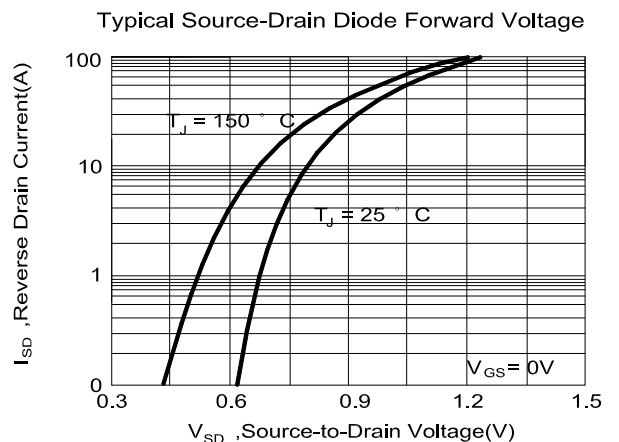
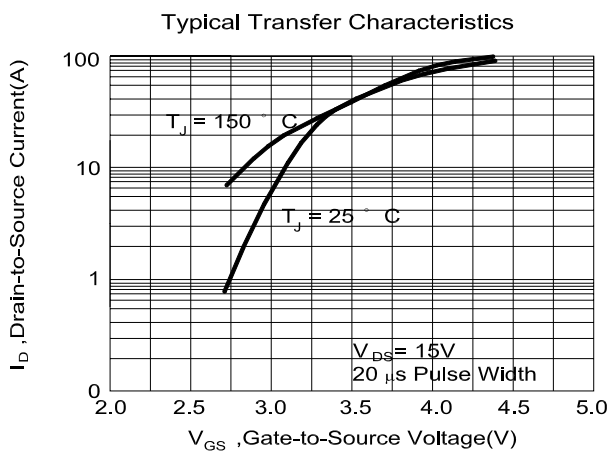
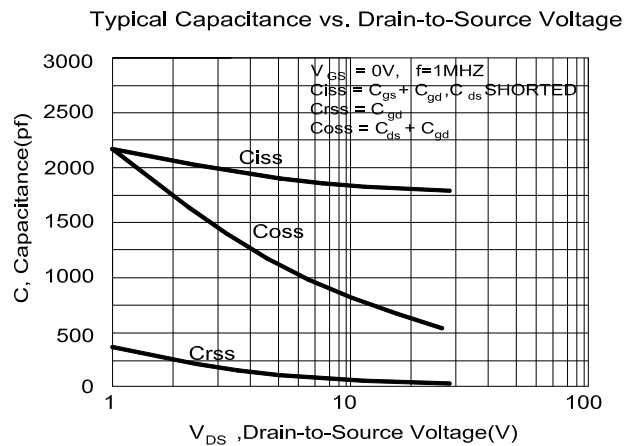
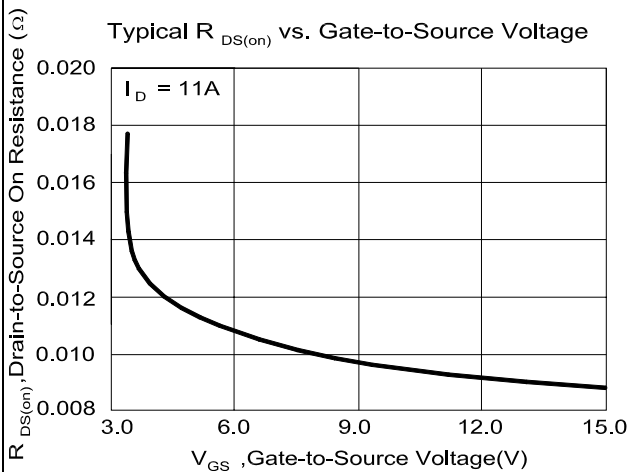
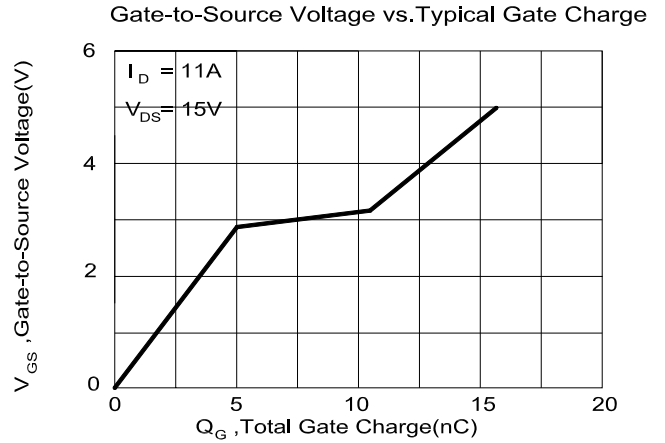
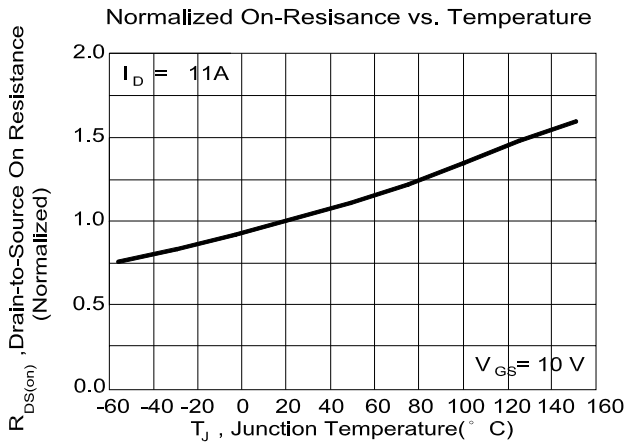
¹Pulse test : Pulse Width $\leq 300 \mu sec$, Duty Cycle $\leq 2\%$.

²Independent of operating temperature.

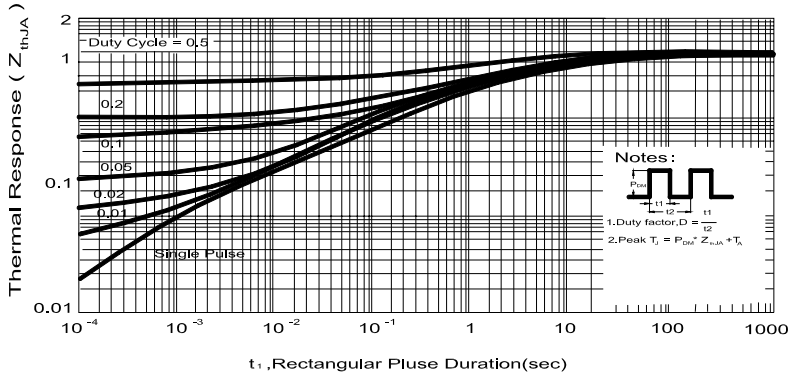
³Pulse width limited by maximum junction temperature.

REMARK: THE PRODUCT MARKED WITH “P1103BVG”, DATE CODE or LOT #

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



Maximum Effective Transient Thermal Impedance, Junction-to-Ambient



SOIC-8 (D) MECHANICAL DATA

Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	4.8	4.9	5.0	H	0.5	0.715	0.83
B	3.8	3.9	4.0	I	0.18	0.254	0.25
C	5.8	6.0	6.2	J		0.22	
D	0.38	0.445	0.51	K	0°	4°	8°
E		1.27		L			
F	1.35	1.55	1.75	M			
G	0.1	0.175	0.25	N			

