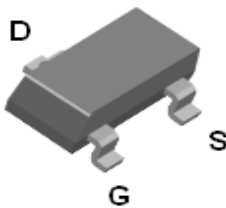


PM600BZ

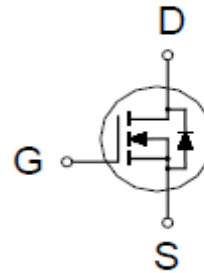
N-Channel Enhancement Mode MOSFET

PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
30V	13.5m Ω @ $V_{GS} = 10V$	6A



SOT-23



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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	30	V
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current	$T_A = 25\text{ }^\circ\text{C}$	I_D	6	A
	$T_A = 70\text{ }^\circ\text{C}$		4.8	
Pulsed Drain Current ¹		I_{DM}	18	
Power Dissipation	$T_A = 25\text{ }^\circ\text{C}$	P_D	0.8	W
	$T_A = 70\text{ }^\circ\text{C}$		0.5	
Operating 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 ²	$R_{\theta JA}$		144	$^\circ\text{C} / \text{W}$

¹Pulse width limited by maximum junction temperature.

²The value of $R_{\theta JA}$ is measured with the device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with $T_A = 25^\circ\text{C}$.

PM600BZ

N-Channel Enhancement Mode MOSFET

ELECTRICAL CHARACTERISTICS (T_J = 25 °C, Unless Otherwise Noted)

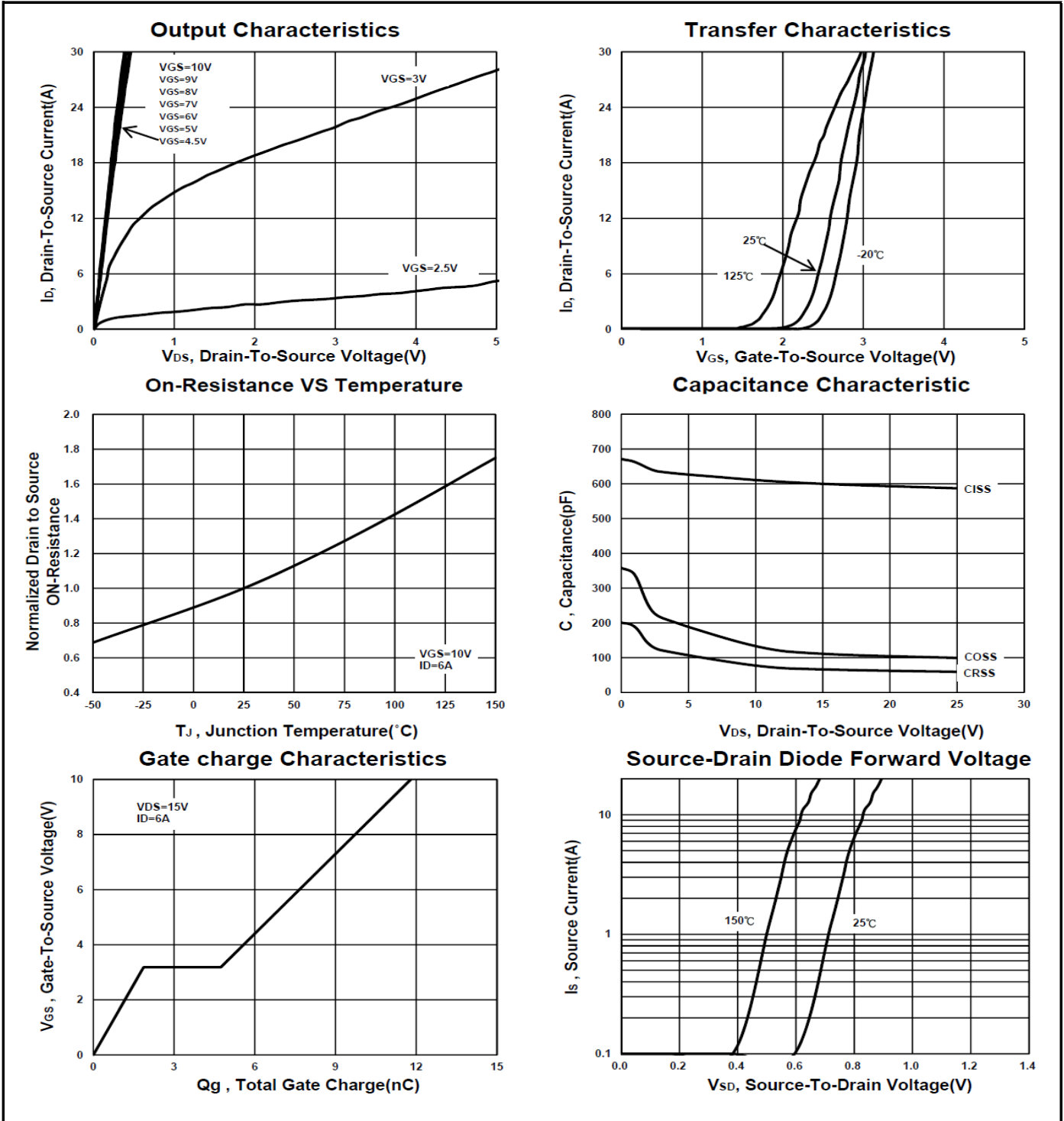
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	30			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1	1.7	2.5	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 24V, V _{GS} = 0V			1	μA
		V _{DS} = 20V, V _{GS} = 0V, T _J = 55 °C			10	
Drain-Source On-State Resistance ¹	R _{DS(ON)}	V _{GS} = 4.5V, I _D = 6A		13	17.5	mΩ
		V _{GS} = 10V, I _D = 6A		11	13.5	
Forward Transconductance ¹	g _{fs}	V _{DS} = 5V, I _D = 6A		40		S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = 15V, f = 1MHz		609		pF
Output Capacitance	C _{oss}			114		
Reverse Transfer Capacitance	C _{rss}			70		
Total Gate Charge ²	Q _g	V _{DS} = 15V, V _{GS} = 10V, I _D = 6A		12.4		nC
Gate-Source Charge ²	Q _{gs}			2		
Gate-Drain Charge ²	Q _{gd}			3.1		
Turn-On Delay Time ²	t _{d(on)}	V _{DS} = 15V, I _D ≅ 6A, V _{GS} = 10V, R _{GEN} = 6Ω		18		nS
Rise Time ²	t _r			39		
Turn-Off Delay Time ²	t _{d(off)}			48		
Fall Time ²	t _f			23		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T_J = 25 °C)						
Continuous Current	I _S				0.7	A
Forward Voltage ¹	V _{SD}	I _F = 6A, V _{GS} = 0V			1.1	V
Reverse Recovery Time	t _{rr}	I _F = 6A, dI _F /dt = 100A / μS		11		nS
Reverse Recovery Charge	Q _{rr}				3	

¹Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

²Independent of operating temperature.

PM600BZ

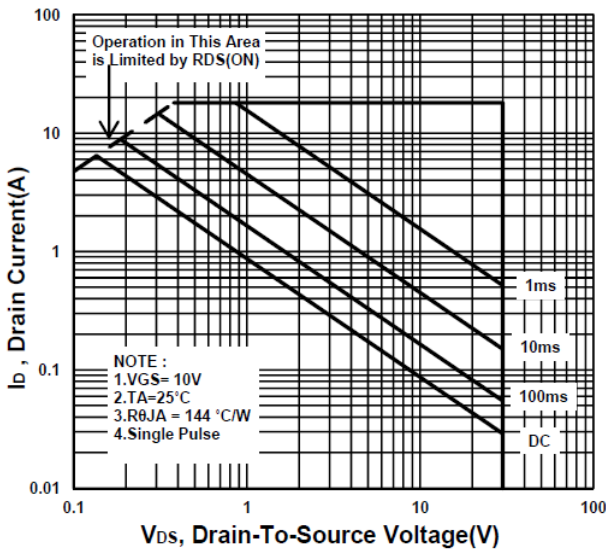
N-Channel Enhancement Mode MOSFET



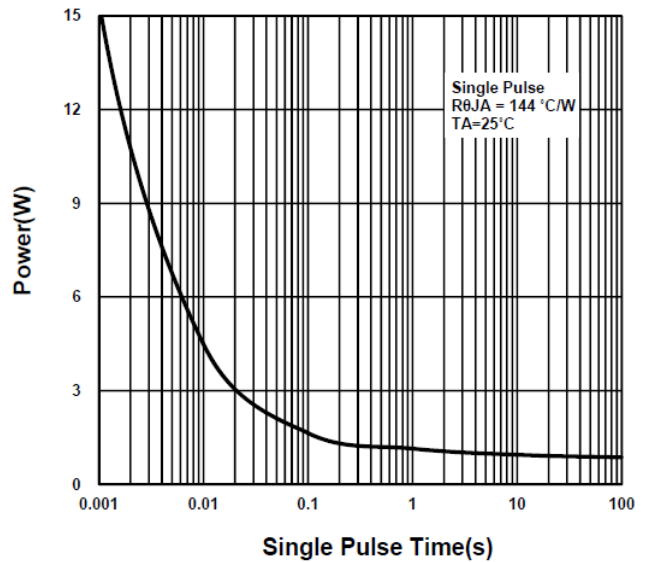
PM600BZ

N-Channel Enhancement Mode MOSFET

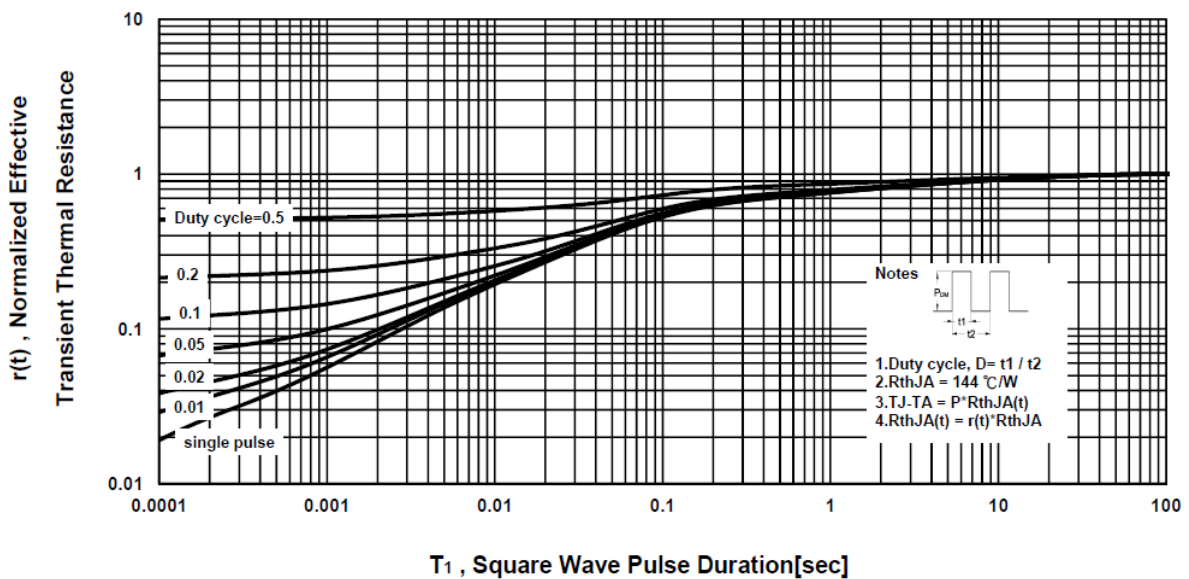
Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve



PM600BZ

N-Channel Enhancement Mode MOSFET

Package Dimension

SOT-23 MECHANICAL DATA

Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A		1.05		H	0.1		0.2
B	2.4		3	I	0.3		0.6
C	1.4		1.73				
D	2.7		3.1				
E	1		1.31				
F	0		0.15				
G	0.3		0.5				

