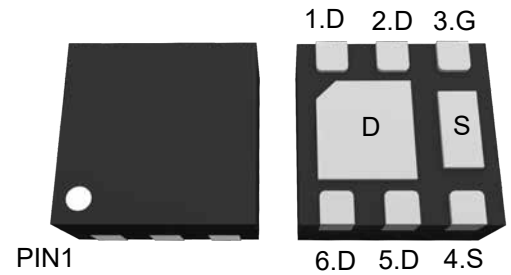


Features

- Low gate charge and $R_{DS(ON)}$
- $V_{DS} = -12V, I_D = -16A$
 $R_{DS(on)} < 18m\Omega @ V_{GS} = -4.5V$

DFN2x2-6L

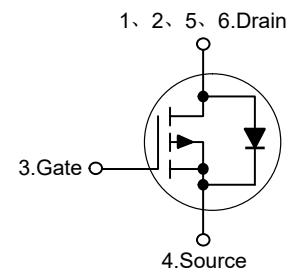


Marking Code: 16P12

Applications

- Load switch
- PWM application

Schematic Diagram



Absolute Maximum Ratings

Ratings at 25°C Case temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$-V_{DS}$	12	V
Gate-Source Voltage	V_{GS}	± 12	V
Drain Current-Continuous	$-I_D$	16	A
Drain Current-Pulsed ^{Note1}	$-I_{DM}$	64	A
Maximum Power Dissipation	P_D	8	W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Thermal Characteristics

Thermal Resistance, Junction-to-Ambient ^{Note4}	$R_{\theta JA}$	278	°C/W
Thermal Resistance, Junction-to-Case ^{Note2}	$R_{\theta JC}$	15.6	°C/W



PJM16P12DF

P-Channel Enhancement Mode Power MOSFET

Electrical Characteristics

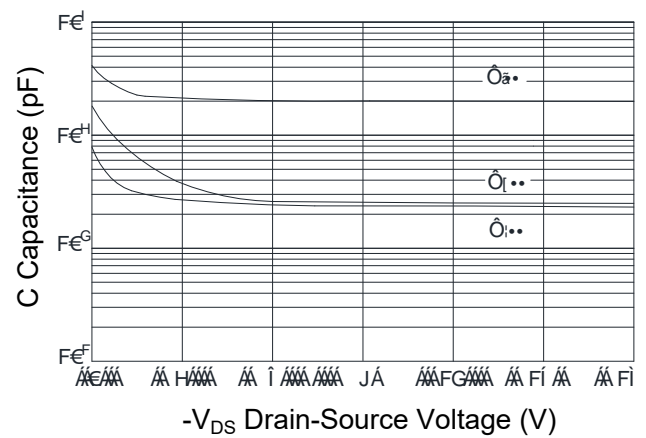
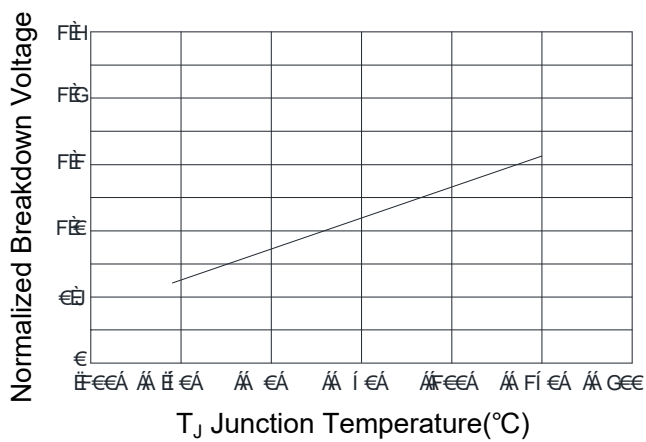
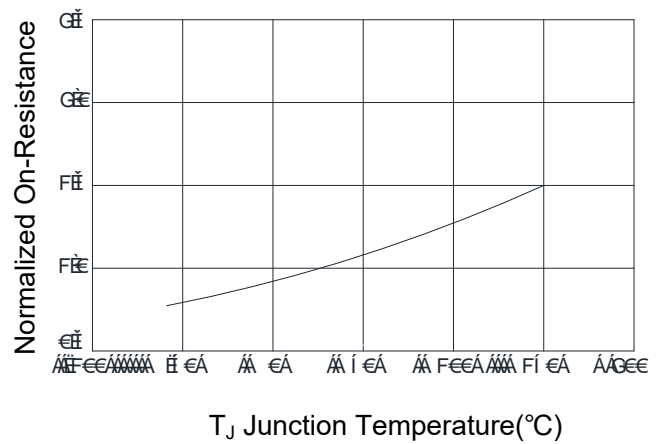
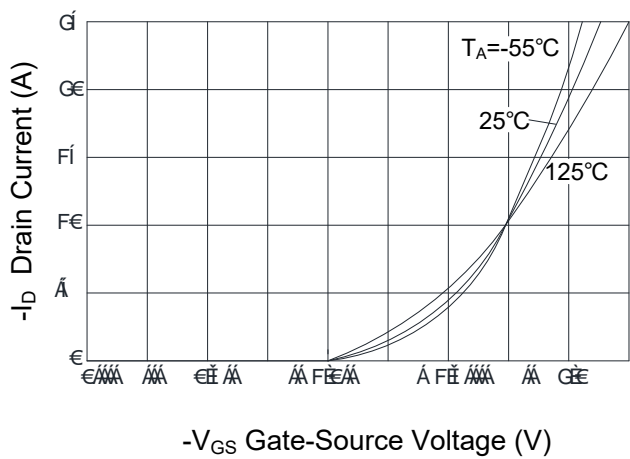
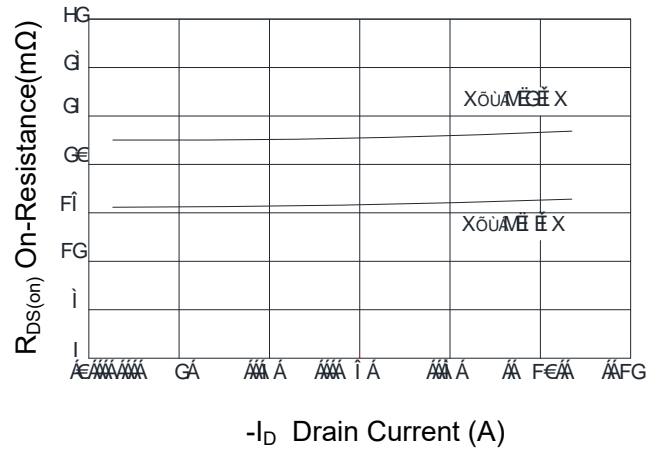
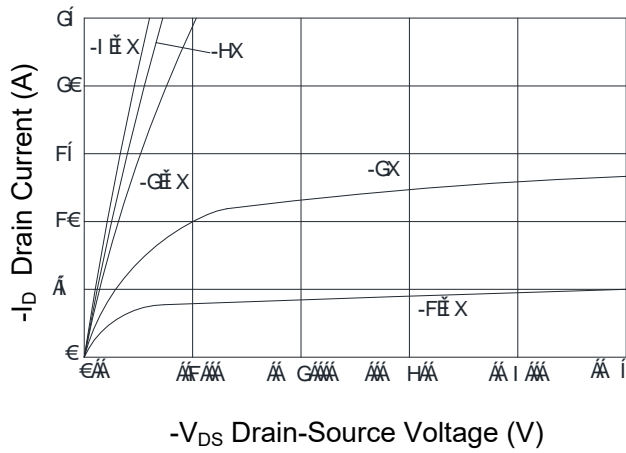
(Ta=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$-V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	12	--	--	V
Zero Gate Voltage Drain Current	$-I_{DSS}$	$V_{DS}=-12V, V_{GS}=0V$	--	--	1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 12V, V_{DS}=0V$	--	--	± 100	nA
Gate Threshold Voltage ^{Note3}	$-V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	0.4	0.7	1	V
Drain-Source On-Resistance ^{Note3}	$R_{DS(on)}$	$V_{GS}=-4.5V, I_D=-8A$	--	16	22	m Ω
		$V_{GS}=-2.5V, I_D=-5A$	--	24	32	m Ω
Forward Transconductance ^{Note3}	g_{FS}	$V_{DS}=-5V, I_D=-6.7A$	--	20	--	S
Dynamic Characteristics						
Input Capacitance	C_{iss}	$V_{DS}=-6V, V_{GS}=0V, f=1MHz$	--	2700	--	pF
Output Capacitance	C_{oss}		--	680	--	pF
Reverse Transfer Capacitance	C_{rss}		--	590	--	pF
Switching Characteristics						
Turn-on Delay Time	$t_{d(on)}$	$V_{DS}=-6V, V_{GEN}=-4.5V, I_D=-8A, R_G=2.5\Omega$	--	11	--	ns
Turn-on Rise Time	t_r		--	35	--	ns
Turn-off Delay Time	$t_{d(off)}$		--	30	--	ns
Turn-off Fall Time	t_f		--	10	--	ns
Total Gate Charge	Q_g	$V_{DS}=-6V, V_{GS}=-4.5V, I_D=-8A$	--	35	--	nC
Gate-Source Charge	Q_{gs}		--	5	--	nC
Gate-Drain Charge	Q_{gd}		--	10	--	nC
Source-Drain Diode Characteristics						
Diode Forward Voltage	$-V_{SD}$	$V_{GS}=0V, I_S=-16A$	--	--	1.2	V
Diode Forward Current	$-I_S$		--	--	16	A

- Note: 1. Repetitive Rating: Pulse width limited by maximum junction temperature.
 2. Surface Mounted on FR4 Board, single-sided copper, tin-plated, mounting pad for drain 6 cm².
 3. Pulse Test: Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
 4. Surface Mounted on FR4 Board, single-sided copper, tin-plated, Standard footprint, in free air.



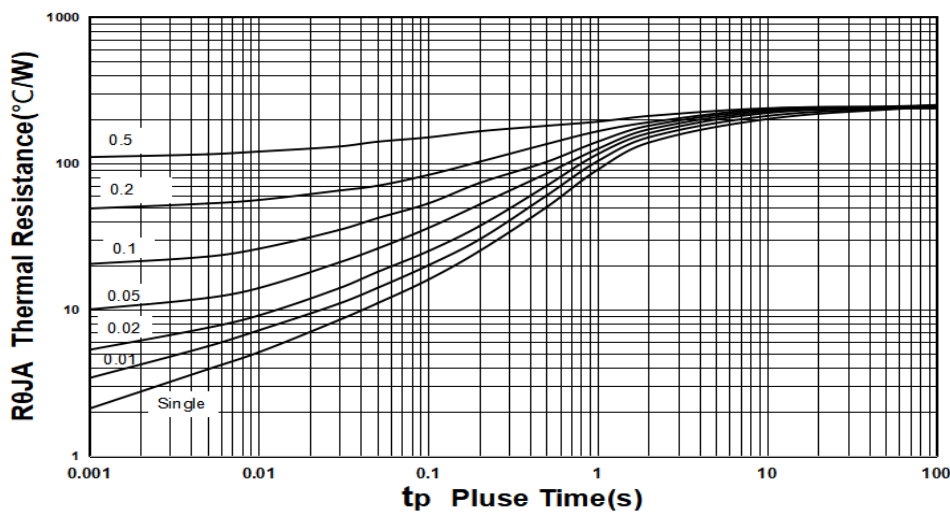
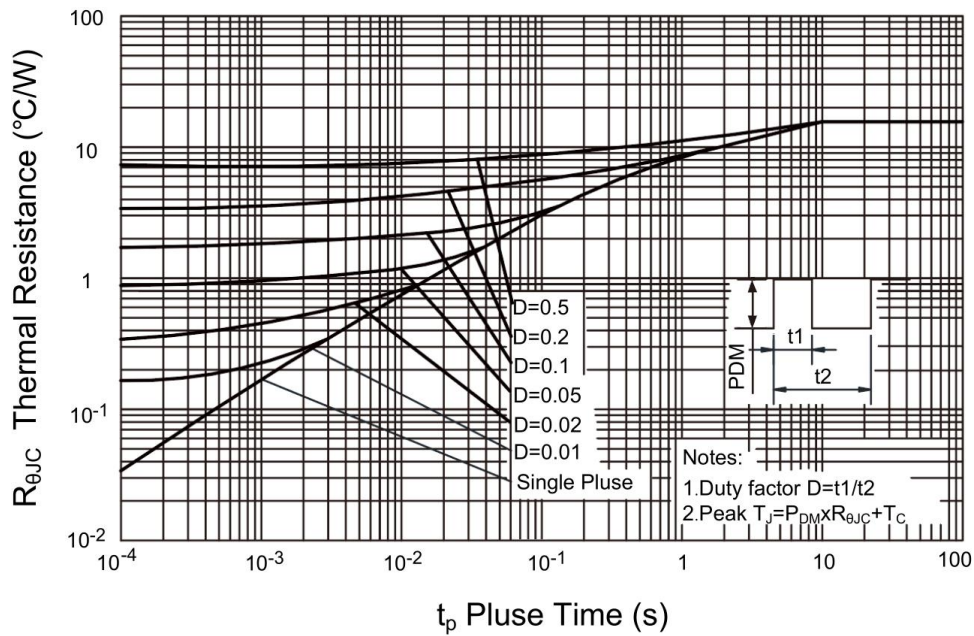
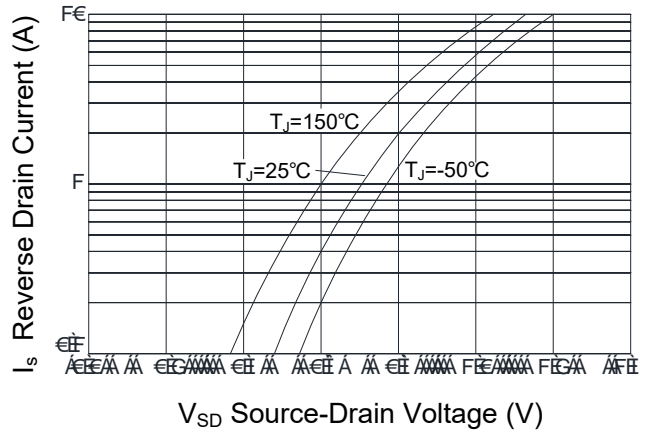
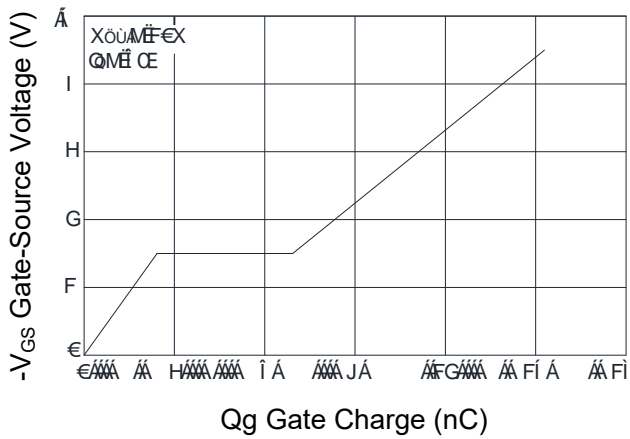
Typical Characteristic Curves





PJM16P12DF

P-Channel Enhancement Mode Power MOSFET



Note: $R_{\theta JA}$ (transient thermal impedance from junction to ambient, typical value).



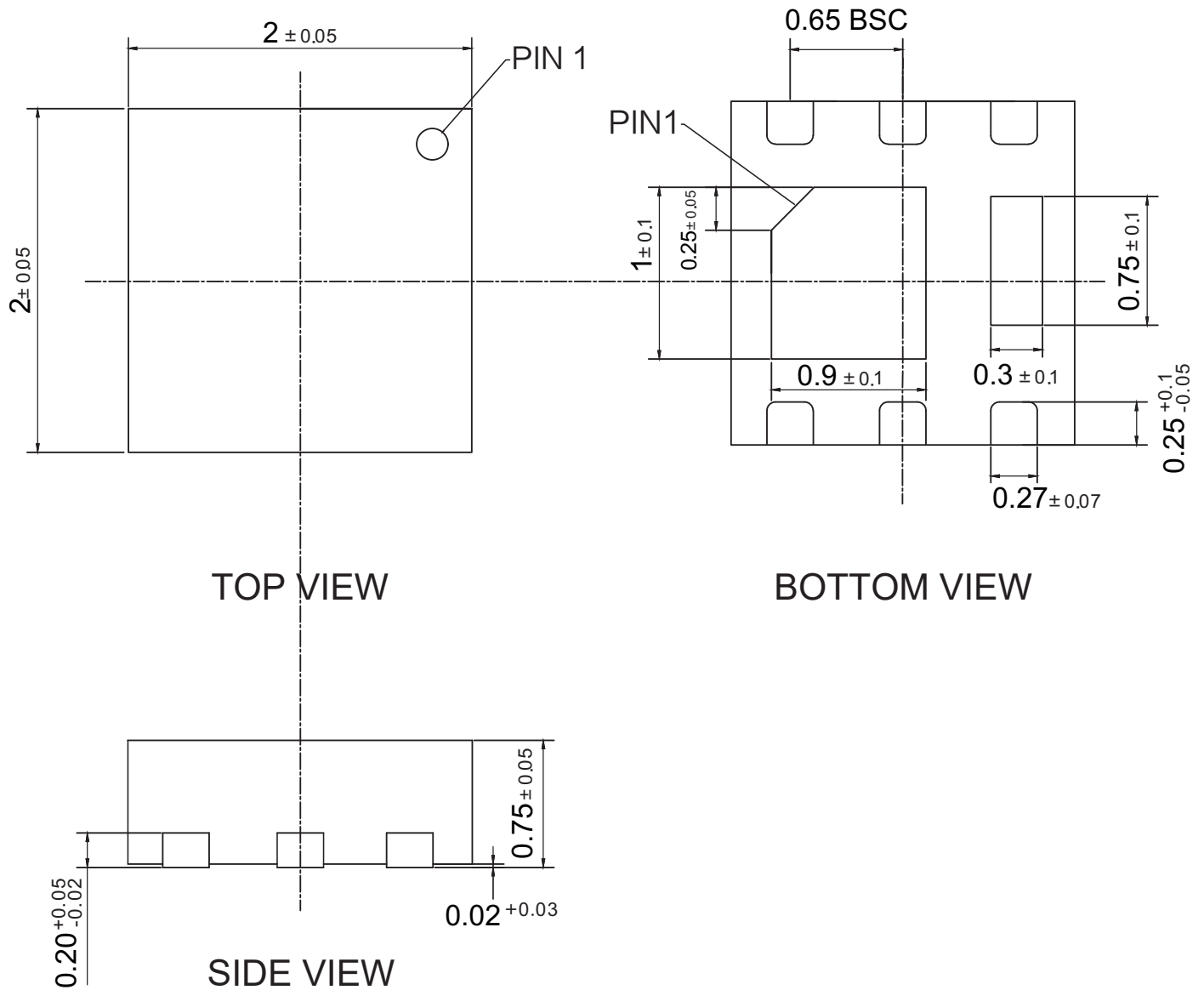
PJM16P12DF

P-Channel Enhancement Mode Power MOSFET

Package Outline

DFN2x2-6L-0001

Dimensions in mm



Ordering Information

Device	Package	Shipping
PJM16P12DF	DFN2x2A-6L	3,000PCS/Reel&7inches

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