



DFNWB2*2-6L-J Plastic-Encapsulate MOSFETS

CJM1216 P-Channel Power MOSFET

DESCRIPTION

The CJM1216 uses advanced trench technology to provide excellent $R_{DS(on)}$, low gate charge and operation with low gate voltage.

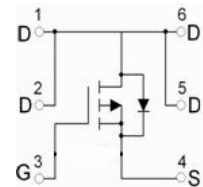
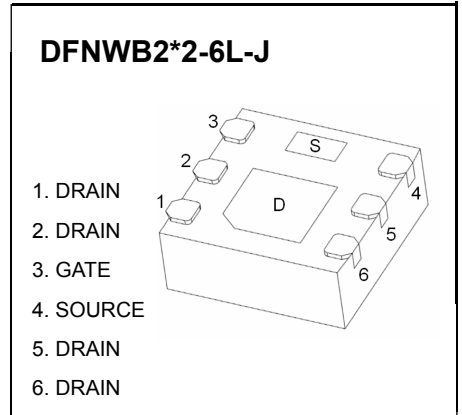
This device is suitable for use as a load switching application and a wide variety of other applications.

FEATURES

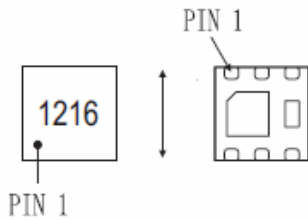
- Advanced trench MOSFET process technology
- Ultra low on-resistance with low gate charge

APPLICATIONS

- PWM application
- Load switch
- Battery charge in cellular handset



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Maximum ratings ($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	-12	V
Gate-Source Voltage	V_{GS}	± 8	
Drain Current-Continuous	I_D	-16	A
Drain Current-Pulsed (note 1)	I_{DM}	-65	
Power Dissipation (note 2 , $T_a=25^\circ\text{C}$)	P_D	2.5	W
Maximum Power Dissipation (note 3 , $T_c=25^\circ\text{C}$)		18	
Thermal Resistance from Junction to Ambient (note 4)	$R_{\theta JA}$	50	$^\circ\text{C/W}$
Thermal Resistance from Junction to Case (note 4)	$R_{\theta JC}$	6.9	
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~+150	

Electrical characteristics (T_a=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-12			V
Gate-Body Leakage Current	I _{GSS}	V _{DS} = 0V, V _{GS} = ±8V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -12V, V _{GS} = 0V			-1	μA
On Characteristics (note 5)						
Gate-Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-0.4	-0.7	-1	V
Drain-Source On-State Resistance	R _{DS(on)}	V _{GS} = -4.5V, I _D = -6.7A			21	mΩ
		V _{GS} = -2.5V, I _D = -6.2A			27	
Forward Transconductance	g _{FS}	V _{DS} = -10V, I _D = -6.7A		40		S
Dynamic Characteristics (note 6)						
Input Capacitance	C _{iss}	V _{DS} = -10V, V _{GS} = 0V, f = 1MHz		2700		pF
Output Capacitance	C _{oss}			680		
Reverse Transfer Capacitance	C _{rss}			590		
Total Gate Charge	Q _g	V _{DS} = -6V, V _{GS} = -8V, I _D = -10A		60	100	nC
				35	48	
Gate-Source Charge	Q _{gs}	V _{DS} = -6V, V _{GS} = -4.5V, I _D = -10A		5		
Gate-Drain Charge	Q _{gd}			10		
Drain-Source Diode Characteristics						
Diode Forward Current (note 5)	I _S				-16	A
Diode Forward Voltage(note 4)	V _{SD}	V _{GS} = 0V, I _{SD} = -8A			-1.2	V

Notes:

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. This test is performed with no heat sink at T_a=25°C.
3. This test is performed with infinite heat sink at T_c=25°C.
4. Surface mounted on FR4 board, t_s≤10S.
5. Pulse Test: Pulse Width ≤300μs, Duty Cycle ≤2%.
6. Guaranteed by design, not subject to production testing.

Typical Characteristics

CJM1216

