

**7V Input , 300mA , CMOS LDO**
**Description**

The AF6217 series are a group of voltage regulators manufactured by CMOS technologies with high ripple rejection, ultra-low noise, low power consumption and low dropout voltage.

The series are very suitable for the battery-powered equipment such as RF applications and other systems requiring a quiet voltage source.

**Applications**

- Wireless Communication tools
- Laptop, Palmtops and PDAs
- Portable AV systems
- Radio control systems
- Battery-Powered Equipment

**Device Information**

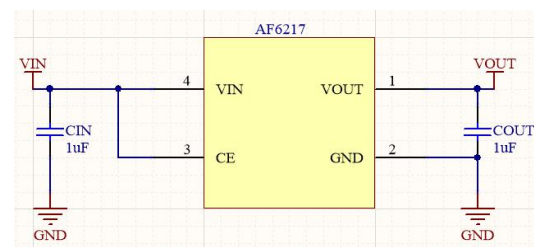
AF 6217 - XX D/C

- ①      ②                  ③      ④

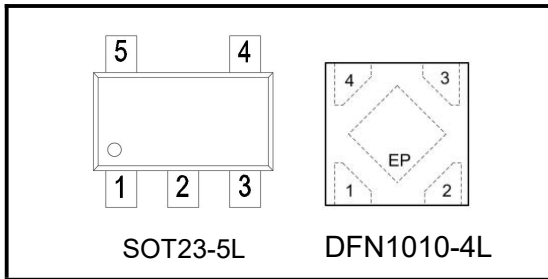
①	Standard
②	Product Series
③	Output Voltage e.g. 28 = 2.8V
④	D: DFN1010-4L Package
	C: SOT23-5L Package

**Features**

- Input Voltage Range: 1.8V~7V
- Output Voltage Range: 0.8V~3.3V
- Output Current: 300mA
- Quiescent Current: 50uA
- Dropout Voltage: 50mV@100mA
- High Accuracy:  $\pm 2\%$  (Typ.)
- High PSRR: 80dB at 1kHz
- Excellent Line and Load Transient Response
- Short-Circuit Protection
- Built-in Current Limiter
- Over-Temperature Protection
- Inrush Current : 150mA

**Typical Application**

**Pin Configuration**

Symbol	Package Pin	
	SOT23-5L	DFN1010-4L
VIN	1	4
GND	2	2
CE	3	3
NC	4	
OUT	5	1



**Absolute Maximum Ratings<sup>(1)</sup>**

(Unless otherwise specified, all voltages are with respect to GND, T<sub>A</sub>=25°C)

PARAMETER		SYMBOL	RATINGS	UNITS
Input Voltage <sup>(3)</sup>		V <sub>IN</sub>	-0.3~8	V
CE Pin Voltage <sup>(3)</sup>		V <sub>CE</sub>	-0.3~V <sub>IN</sub>	V
Output Voltage <sup>(3)</sup>		V <sub>OUT</sub>	-0.3~V <sub>IN</sub>	V
Output Current		I <sub>OUT</sub>	400	mA
Power Dissipation	DFN1010-4	P <sub>D</sub>	0.4	W
	SOT23-5			
Operating Junction Temperature Range		T <sub>J</sub>	-40~125	°C
Storage Temperature		T <sub>STG</sub>	-40~125	°C
Lead Temperature(Soldering, 10 sec)		T <sub>L</sub>	260	°C
ESD rating <sup>(2)</sup>		Human Body Model -(HBM)	2	kV
		Machine Model-(MM)	200	V

(1). Stresses beyond those listed under absolute maximum ratings may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under recommended operating conditions is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

(2). ESD testing is performed according to the respective JESD22 JEDEC standard. The human body model is a 100 pF capacitor discharged through a 1.5kΩ resistor into each pin. The machine model is a 200pF capacitor discharged directly into each pin.

(3). All voltages are with respect to network ground terminal.



**✚ Electronics Characteristics**

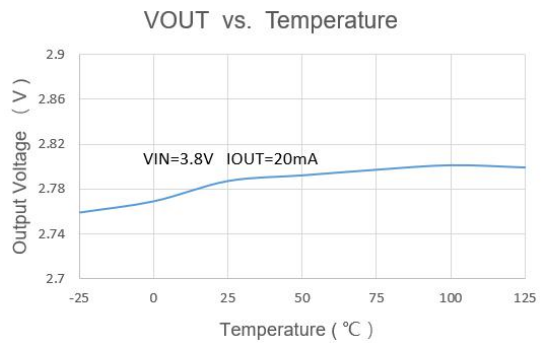
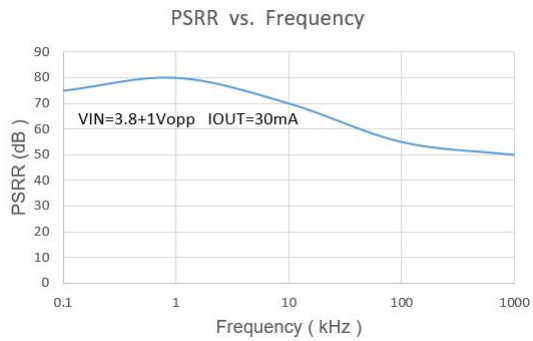
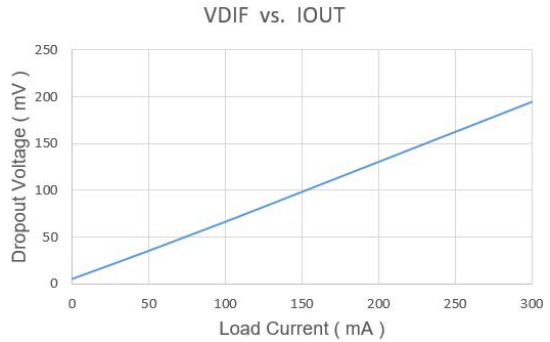
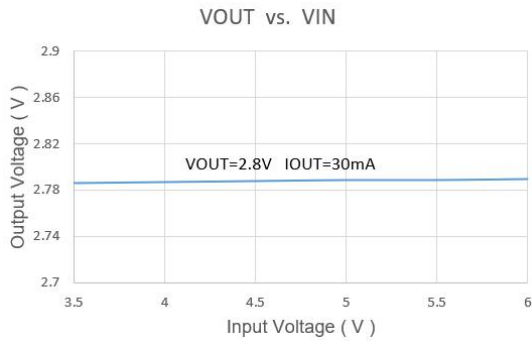
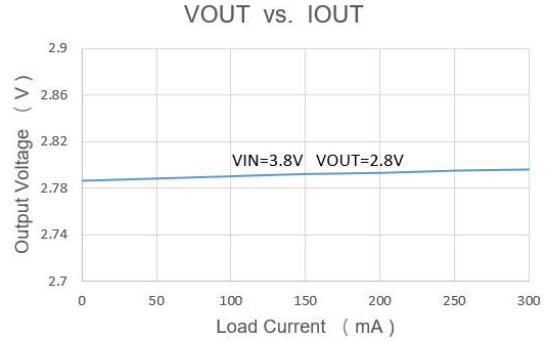
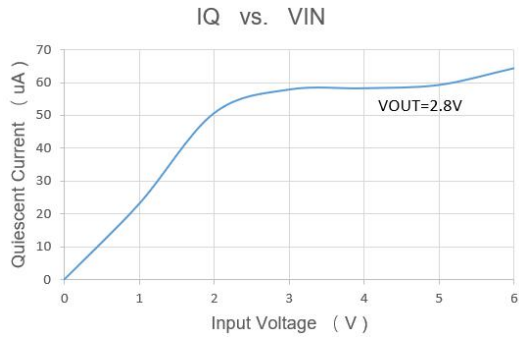
(Unless otherwise specified,  $V_{IN} = V_{CE} = V_{OUT} + 1V$ ,  $C_{IN} = C_{OUT} = 1\mu F$ ,  $T_A = 25^\circ C$ )

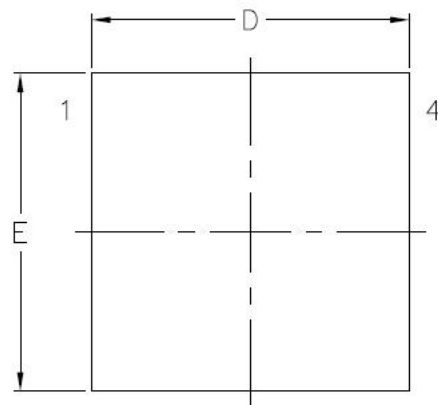
PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT	
Input Voltage	$V_{IN}$		1.8		7	V	
Output Voltage	$V_{OUT}$	$I_{OUT} = 1mA$	0.98 $V_{OUT}$	$V_{OUT}$	1.02 $V_{OUT}$	V	
Dropout Voltage	$V_{DIF}$	$I_{OUT} = 100mA$		50		mV	
Quiescent Current	$I_Q$	$I_{OUT} = 0$		50	100	$\mu A$	
Shutdown current	$I_{CEL}$	$V_{CE} = V_{SS}$		0.1	1	$\mu A$	
Line Regulation	$\Delta V_{LINE}$	$I_{OUT} = 10mA$ $V_{OUT} + 1V \leq V_{IN} \leq 6V$		0.01	0.2	%/V	
Load Regulation	$\Delta V_{LOAD}$	$V_{IN} = V_{OUT} + 1V$ $1mA \leq I_{OUT} \leq 100mA$		5		mV	
Temperature Coefficient	$T_C$	$I_{OUT} = 10mA$ $-40^\circ C < T_A < 85^\circ C$		50		ppm	
Short Current	$I_{SHORT}$	$V_{OUT} = V_{SS}$		200		mA	
Accuracy		$I_{OUT} = 10mA$	-2		2	%	
Power Supply Rejection Ratio	PSRR	$I_{OUT} = 30mA$	100Hz		75		dB
			1kHz		80		
			10kHz		70		
			100kHz		55		
			1MHz		50		
Thermal Shutdown Temperature	$T_{SD}$			150		$^\circ C$	
CE "High" Voltage	$V_{CEH}$		1.5			V	
CE "Low" Voltage	$V_{CEL}$				0.4	V	
Discharge Resistance	$R_{DISCHRG}$	$V_{IN} = 5V$		6		$\Omega$	
Inrush Current	$I_{RUSH}$	$V_{IN} = 0 \rightarrow 5V$ $I_{OUT} = 100mA$		150		mA	
Limit Current	$I_{LIMIT}$		300	400		mA	



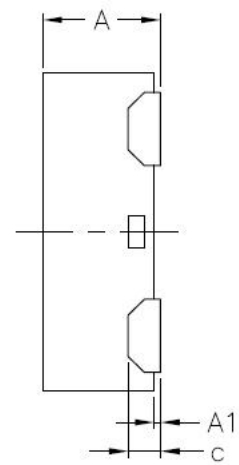
### Typical Characteristics

(Unless otherwise specified,  $V_{IN}=V_{OUT}+1V$ ,  $C_{IN}=C_{OUT}=1\mu F$ ,  $T_A=25^\circ C$ )

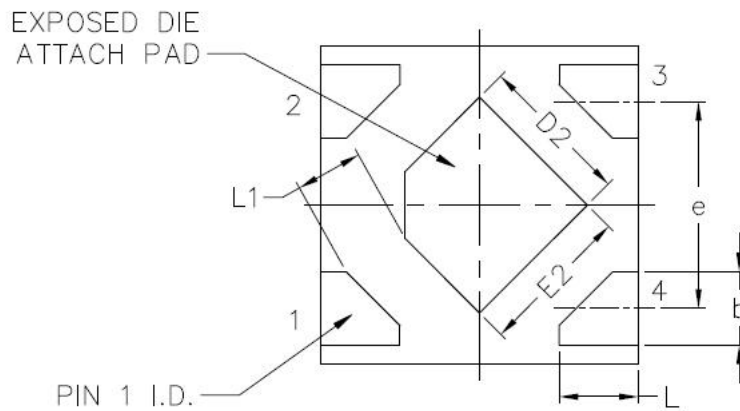


**Package Information**


TOP VIEW



SIDE VIEW



BOTTOM VIEW

尺寸 标注	最小 (mm)	标准 (mm)	最大 (mm)	尺寸 标注	最小 (mm)	标准 (mm)	最大 (mm)
A	0.32	0.37	0.41	e	0.65 BSC		
A1	0.00	0.02	0.05	E	0.95	1.00	1.05
b	0.18	0.23	0.28	E2	0.43	0.48	0.53
c	0.102 REF			L	0.20	0.25	0.30
D	0.95	1.00	1.05	L1	0.205 REF		
D2	0.43	0.48	0.53				



**Order Information**

Voltage	DFN1010-4L	Marking	Shipping	SOT23-5	Marking	Shipping
1.2	√	1V2	Tape and Reel, 10K	√	1712	Tape and Reel, 3K
1.5				√	1715	
1.8	√	1V8		√	1718	
2.8	√	2V8		√	1728	
3.0				√	1730	
3.3				√	1733	

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