



7V Input , 500mA , Low Current Consumption , CMOS LDO

Description

The AF6215 series are CMOS-based voltage LDOs with high output voltage accuracy, low current consumption and high ripple rejection. To prevent the destruction by over current, current limit circuit is included.

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

Applications

- Portable consumer equipment
- Wireless handsets, Smart Phones
- Bluetooth, Digital cameras and Digital audio
- PDAs and other handheld products

Device Information

AF 6215 – XX C/D

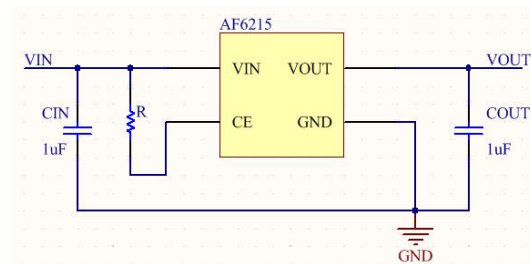
- ① ② ③ ④

①	Standard
②	Product Name
③	Output Voltage e.g. 33 = 3.3V
④	C: SOT23-5L Package
	D: DFN1X1-4 Package

Features

- Input Voltage Range: 2V~7V
- Output Voltage Range: 1.2V~5V
- Output Current: 500mA
- Quiescent Current: 5uA
- Dropout Voltage: 150mV@150mA
- Voltage Accuracy: ±2%(Typ.)
- PSRR: 65dB at 1kHz
- Excellent Line and Load Transient Response
- Short-Circuit Protection
- Built-in Current Limiter

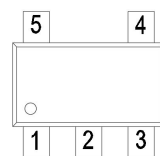
Typical Application



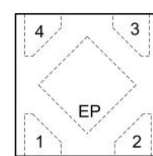
Pin Configuration

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

EP can connect GND or Float



SOT23-5L



DFN1010-4L



✚ Absolute Maximum Ratings⁽¹⁾

(Unless otherwise specified, all voltage are with respect to GND, TA=25°C)

PARAMETER		SYMBOL	RATINGS	UNITS
Input Voltage		V _{IN}	-0.3~8	V
Output Voltage		V _{OUT}	-0.3~V _{IN}	V
Output Current		I _{OUT}	600	mA
Power Dissipation	SOT23-5	P _D	0.4	W
	DFN1X1-4			
Operating Junction Temperature Range		T _J	-40~125	°C
Storage Temperature		T _{STG}	-40~125	°C
Lead Temperature(Soldering, 10 sec)		T _L	260	°C

(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.

✚ Electronics Characteristics

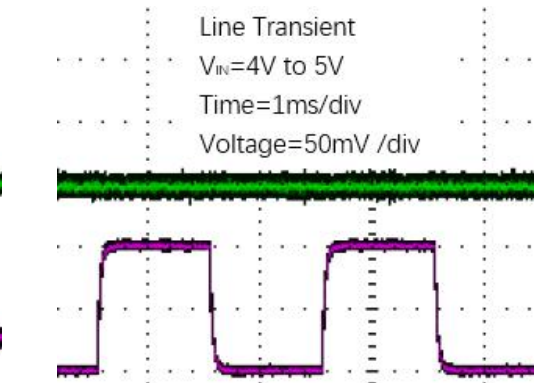
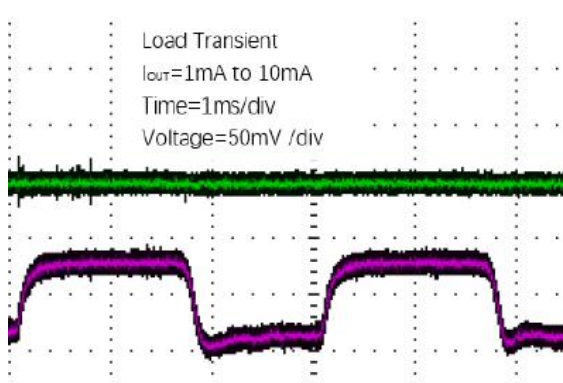
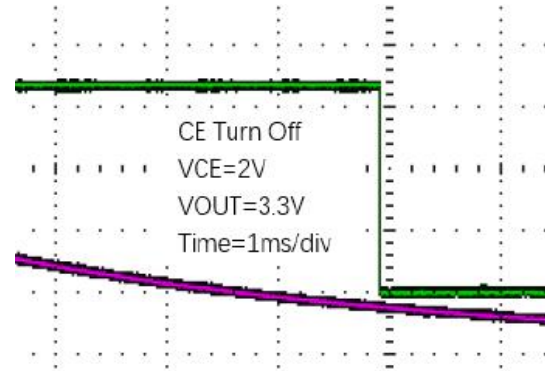
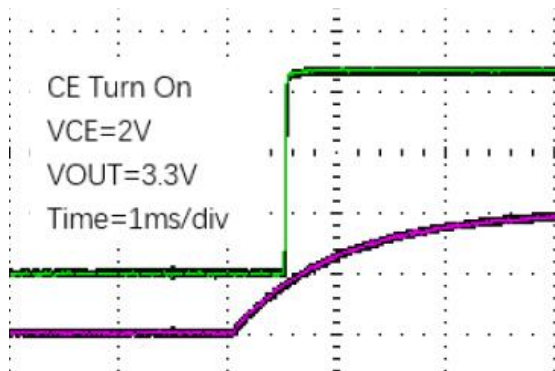
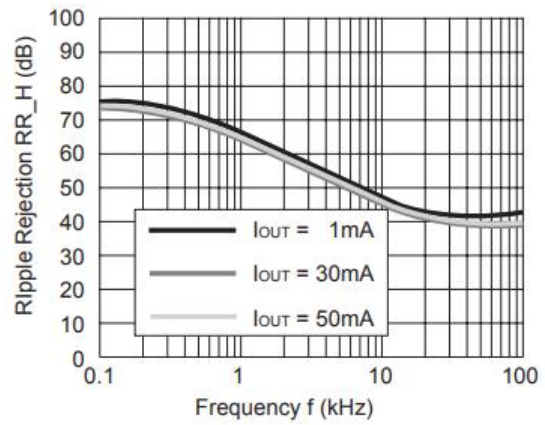
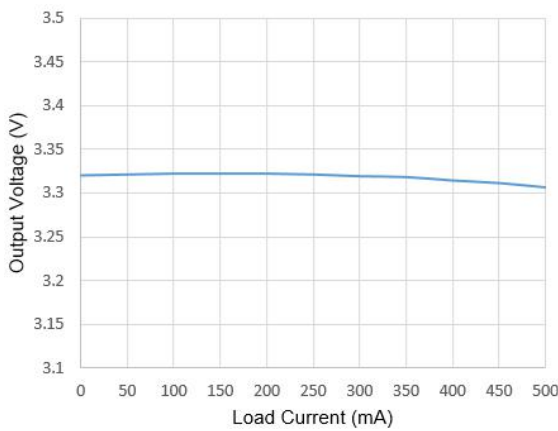
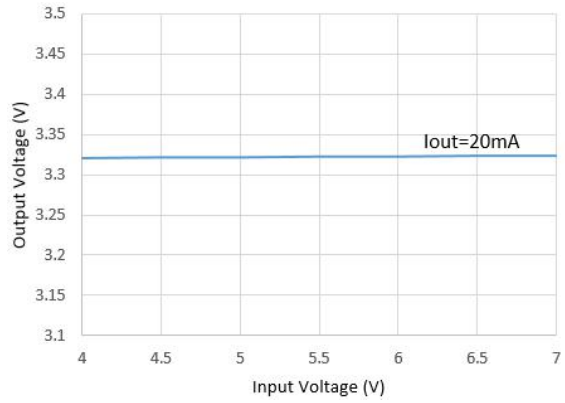
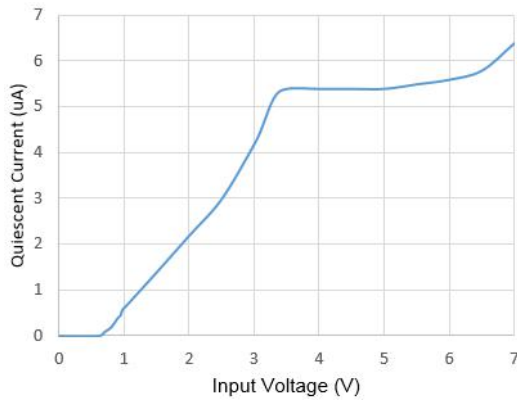
(Unless otherwise specified, V_{IN}=V_{OUT}+1V, C_{IN}=C_{OUT}=1uF, TA=25°C)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	V _{IN}		2		7	V
Output Voltage	V _{OUT}		0.98 V _{OUT}	V _{OUT}	1.02 V _{OUT}	V
Dropout Voltage	V _{DIF}	I _{OUT} =150mA V _{OUT} ≥3.0V		150		mV
Quiescent Current	I _Q	I _{OUT} =0		5	10	uA
Shutdown current	I _{CEL}	V _{CE} =V _{SS}			0.1	uA
Line Regulation	ΔV _{LINE}	I _{OUT} =10mA V _{OUT} +1V≤V _{IN} ≤6V		0.01	0.2	%/V
Load Regulation	ΔV _{LOAD}	V _{IN} =V _{OUT} +1V 1mA≤I _{OUT} ≤100mA		10		mV
Temperature Coefficient	TC	I _{OUT} =10mA -40°C<T _A <125°C		100		ppm
Short Current	I _{SHORT}	V _{OUT} =V _{SS}		50		mA
Power Supply Rejection Ratio	PSRR	I _{OUT} =50 mA	1kHz		65	dB
			10kHz		50	
CE "High"	V _{CE} "H"		1.5		V _{IN}	V
CE "Low"	V _{CE} "L"				0.3	V



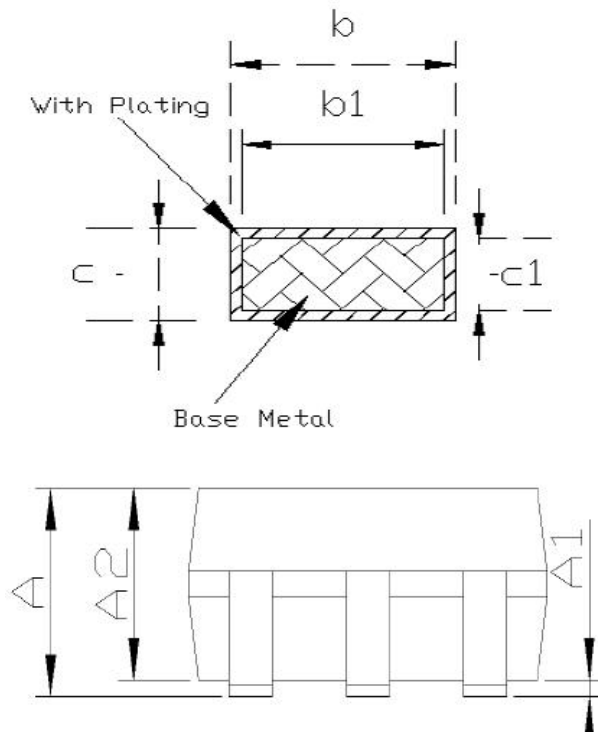
Typical Characteristics

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



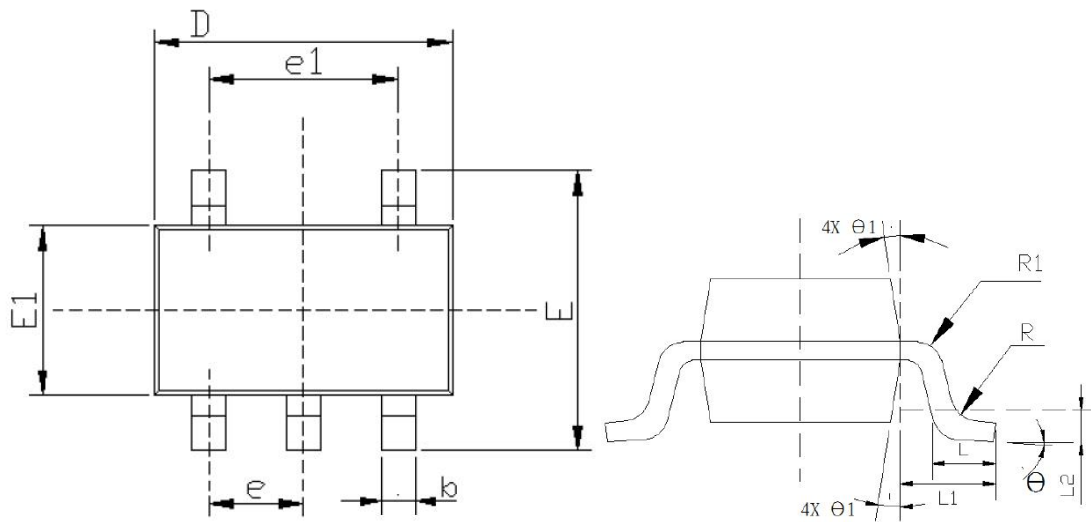


Package Information

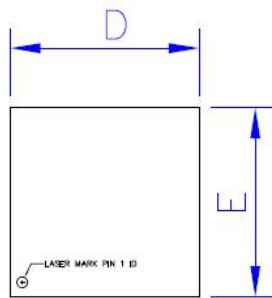


Common Dimensions (Units of Measure=Millimeter)			
SYMBOL	MINIMUM	NOMINAL	MAXIMUM
A	-	-	1.35
A1	0	-	0.15
A2	1.00	1.10	1.20
b	0.35	-	0.45
b1	0.32	-	0.38
c	0.14	-	0.20
c1	0.14	0.15	0.16
D	2.82	2.92	3.02
E	2.60	2.80	3.00
E1	1.526	1.626	1.726
e	0.90	0.95	1.00
e1	1.80	1.90	2.00
L	0.35	0.45	0.60
L1	0.6 REF		
L2	0.25 REF		
R	0.10	-	-
R1	0.10	-	0.25
θ	0°	4°	8°
θ 1	5°	10°	15°

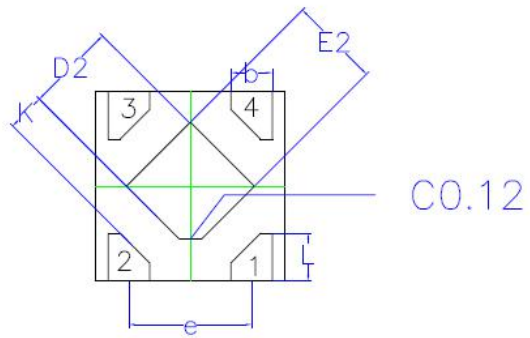
SOT23-5L



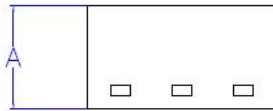
DFN1010-4L



TOP VIEW



BOTTOM VIEW



SIDE VIEW

COMMON DIMENSION (MM)			
PKG	DFN1010		
REF.	MIN.	NOM.	MAX
A	0.34	0.37	0.40
b	0.17	0.22	0.27
D	0.95	1.00	1.05
E	0.95	1.00	1.05
D2	0.43	0.48	0.53
E2	0.43	0.48	0.53
L	0.20	0.25	0.30
e	0.60	0.65	0.70
K	0.15	—	—



Order Information

Voltage	DFN1010-4L	Marking	Shipping	SOT23-5L	Marking	Shipping
1.2	√	1V2	Tape and Reel, 10K	√	1512	Tape and Reel, 3K
1.8	√	1V8		√	1518	
2.5	√	2V5		√	1525	
2.8	√	2V8		√	1528	
3.0	√	3V0		√	1530	
3.3	√	3V3		√	1533	
3.6	√	3V6		√	1536	

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