

**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**

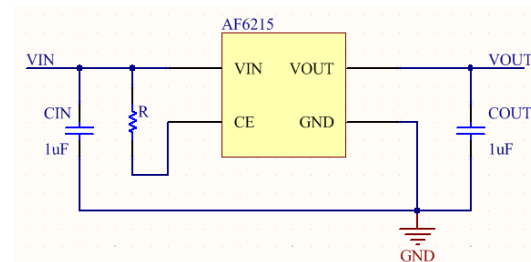
AF 6215 – XX C/D

- 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:  $\pm 2\%$ (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		
<p style="text-align: center;">SOT23-5L                      DFN1010-4L</p>		



## AF6215 Series

### ✚ Absolute Maximum Ratings<sup>(1)</sup>

(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.

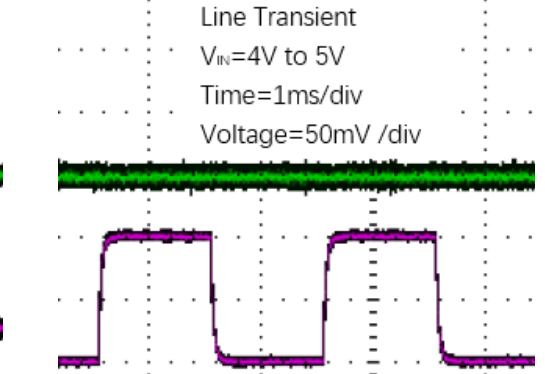
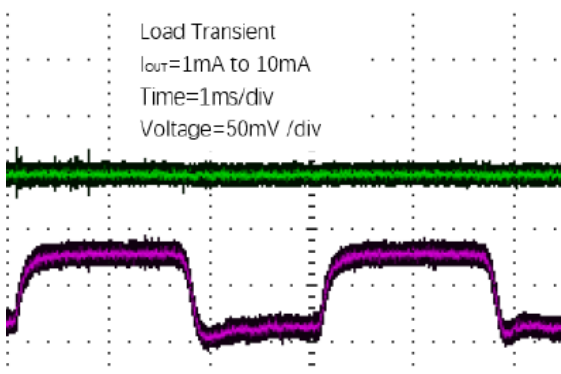
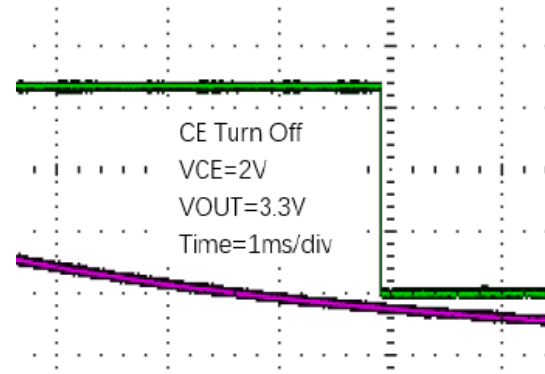
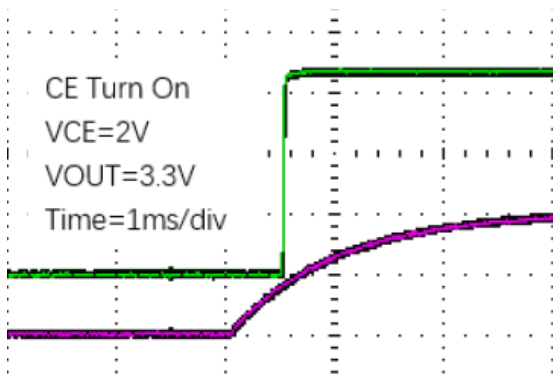
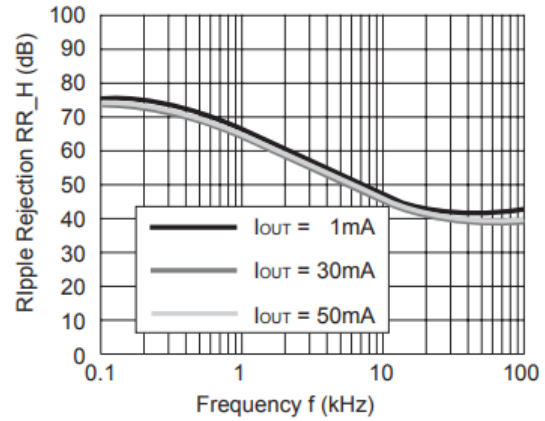
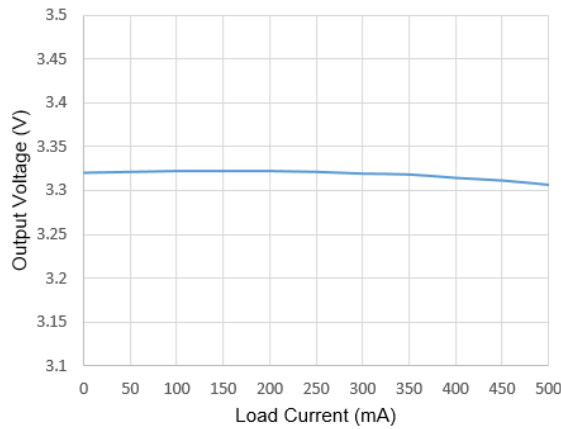
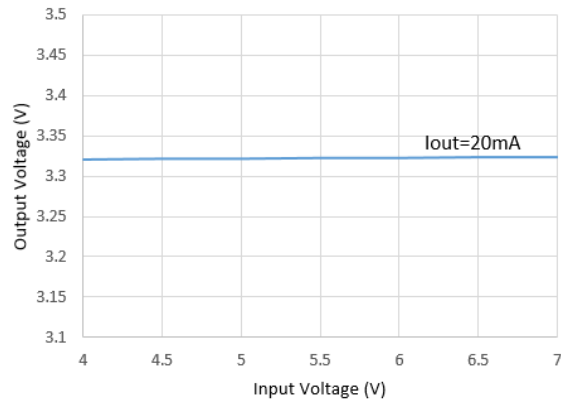
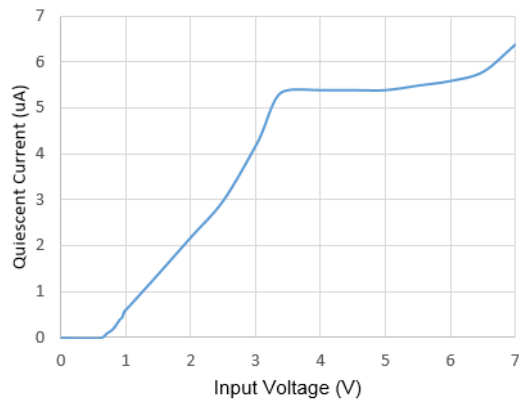
### ✚ Electronics Characteristics

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

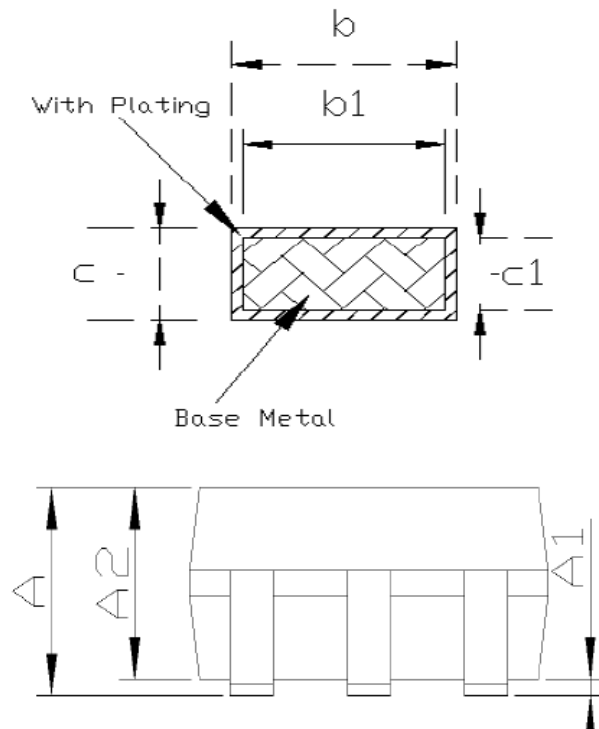
PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Input Voltage	$V_{IN}$		2		7	V
Output Voltage	$V_{OUT}$		0.98 $V_{OUT}$	$V_{OUT}$	1.02 $V_{OUT}$	V
Dropout Voltage	$V_{DIF}$	$I_{OUT}=150mA$ $V_{OUT}\geq 3.0V$		150		mV
Quiescent Current	$I_Q$	$I_{OUT}=0$		5	10	uA
Shutdown current	$I_{CEL}$	$V_{CE}=V_{SS}$			0.1	uA
Line Regulation	$\Delta V_{LINE}$	$I_{OUT}=10mA$ $V_{OUT}+1V\leq V_{IN}\leq 6V$		0.01	0.2	%/V
Load Regulation	$\Delta V_{LOAD}$	$V_{IN}=V_{OUT}+1V$ $1mA\leq I_{OUT}\leq 100mA$		10		mV
Temperature Coefficient	TC	$I_{OUT}=10mA$ $-40^\circ C < T_A < 125^\circ C$		100		ppm
Short Current	$I_{SHORT}$	$V_{OUT}=V_{SS}$		50		mA
Power Supply Rejection Ratio	PSRR	$I_{OUT}=50mA$	1kHz		65	dB
			10kHz		50	
CE "High"	VCE"H"		1.5		$V_{IN}$	V
CE "Low"	VCE"L"				0.3	V

## Typical Characteristics

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

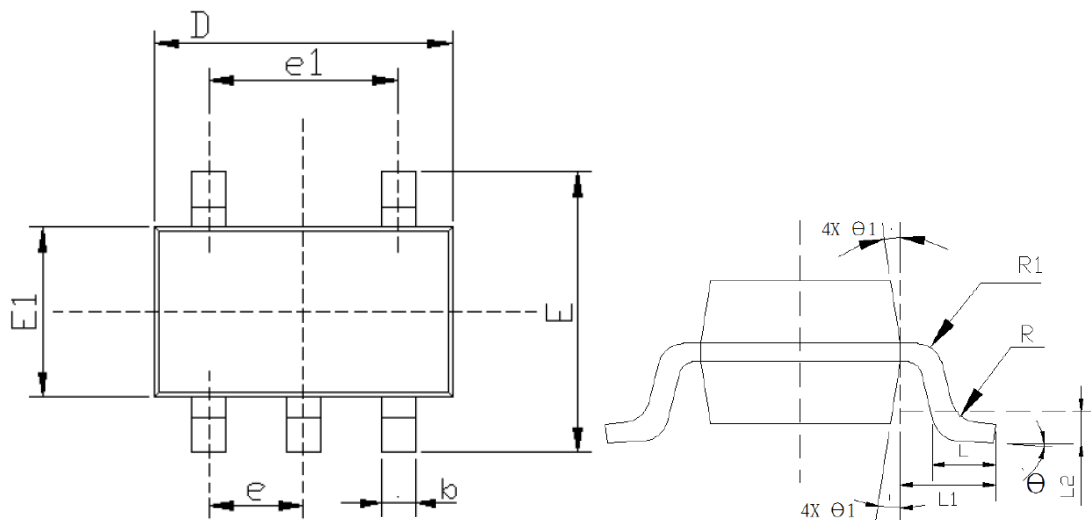


### Package Information

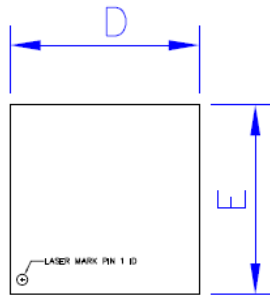


Common Dimensions			
(Units of Measure=Millimeter)			
SYMBOL	MINIMUM	NOMINAL	MAXIMUM
A	-	-	1.35
A1	0	-	0.15
A2	1.00	1.10	1.20
b	0.35	-	0.45
b1	0.32	-	0.38
c	0.14	-	0.20
c1	0.14	0.15	0.16
D	2.82	2.92	3.02
E	2.60	2.80	3.00
E1	1.526	1.626	1.726
e	0.90	0.95	1.00
e1	1.80	1.90	2.00
L	0.35	0.45	0.60
L1	0.6 REF		
L2	0.25 REF		
R	0.10	-	-
R1	0.10	-	0.25
$\theta$	0°	4°	8°
$\theta_1$	5°	10°	15°

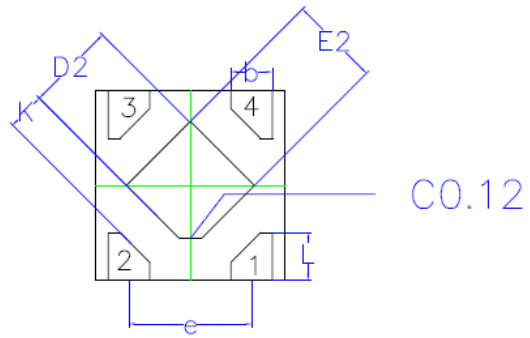
SOT23-5L



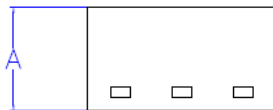
### DFN1010-4L



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	

**DISCLAIMER**

AFSEMI RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. AFSEMI DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICIENCE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

THE GRAPHS PROVIDED IN THIS DOCUMENT ARE STATISTICAL SUMMARIES BASED ON A LIMITED NUMBER OF SAMPLES AND ARE PROVIDED FOR INFORMATIONAL PURPOSE ONLY. THE PERFORMANCE CHARACTERISTICS LISTED IN THEM ARE NOT TESTED OR GUARANTEED. IN SOME GRAPHS, THE DATA PRESENTED MAY BE OUTSIDE THE SPECIFIED OPERATING RANGE (E.G. OUTSIDE SPECIFIED POWER SUPPLY RANGE) AND THEREFORE OUTSIDE THE WARRANTED RANGE.