



AF6226 Series

7V Input, 200mA, Low Current Consumption, CMOS LDO

➤ Description

The AF6226 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 6226 – XX N/M/C/D

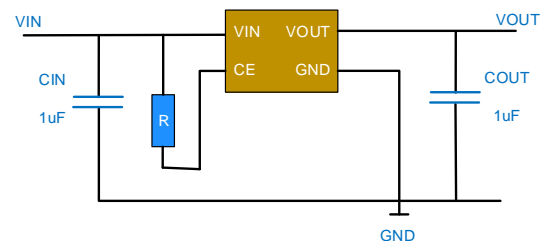
① ② ③ ④

①	Standard
②	Product Name
③	Output Voltage e.g. 33 = 3.3V
④	N: SOT-23 Package
	M: SOT-23-3 Package
	P: SOT-89 Package
	C: SOT-23-5L Package
	D: DFN1010-4L Package

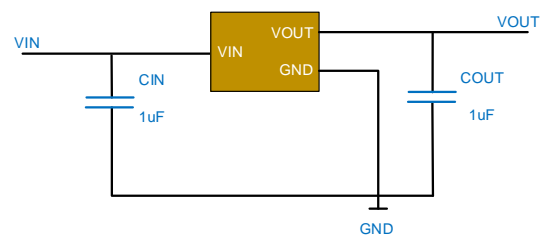
➤ Features

- Input Voltage Range: 2V~7V
- Output Voltage Range: 1.2V~5V
- Output Current: 200mA
- Quiescent Current: 2uA
- Dropout Voltage: 160mV@150mA
- Voltage Accuracy: $\pm 2\%$ (Typ.)
- PSRR: 70dB at 1kHz
- Excellent Line and Load Transient Response
- Short-Circuit Protection
- Built-in Current Limiter

➤ Typical Application



SOT-23-5L/DFN1010-4L



SOT-23/SOT-23-3/SOT-89



➤ PIN Configuration

SYMBOL	Package Pin						
	SOT-23	SOT-23-3	SOT-89	SOT-23-5L	DFN1010-4L		
VIN	3	3	2	1	4		
GND	1	1	1	2	2		
CE				3	3		
NC				4			
OUT	2	2	3	5	1		
EP can connect GND or Float							
SOT-23(SOT-23-3)		SOT-89		SOT-23-5L		DFN1010-4L	

➤ Absolute Maximum Ratings^① (Unless otherwise specified, T_A=25°C, all voltage are with respect to GND)

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}	200	mA
Power Dissipation	SOT-23	P _D	W
	SOT-23-3		
	SOT-23-5L		
	DFN1010-4L		
	SOT-89		
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.



AF6226 Series

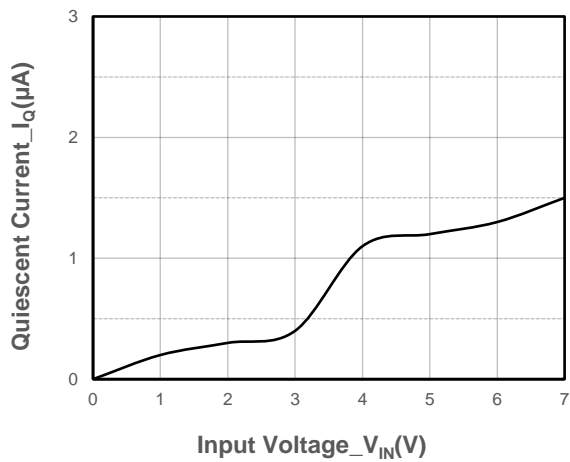
- **Electronics Characteristics (Unless otherwise specified, $T_A=25^\circ\text{C}$, $V_{IN}=V_{OUT}+1\text{V}$, $C_{IN}=C_{OUT}=1\mu\text{F}$)**

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}	$I_{OUT}=150\text{mA}$ $V_{OUT}\geq 3.0\text{V}$		150		mV
Quiescent Current	I_Q	$I_{OUT}=0$		2	6	μA
Shutdown current	I_{CEL}	$V_{CE}=V_{SS}$			0.1	μA
Line Regulation	ΔV_{LINE}	$I_{OUT}=10\text{mA}$ $V_{OUT}+1\text{V}\leq V_{IN}\leq 6\text{V}$		0.01	0.2	%/V
Load Regulation	ΔV_{LOAD}	$V_{IN}=V_{OUT}+1\text{V}$ $1\text{mA}\leq I_{OUT}\leq 100\text{mA}$		10		mV
Temperature Coefficient	TC	$I_{OUT}=10\text{mA}$ $-40^\circ\text{C}<T_A<125^\circ\text{C}$		100		ppm
Short Current	I_{SHORT}	$V_{OUT}=V_{SS}$		50		mA
Power Supply Rejection Ratio	PSRR	$I_{OUT}=50\text{mA}$	1kHz		70	dB
			10kHz		48	
CE "High"	V_{CEH}		0.9		V_{IN}	V
CE "Low"	V_{CEL}			0.7		V

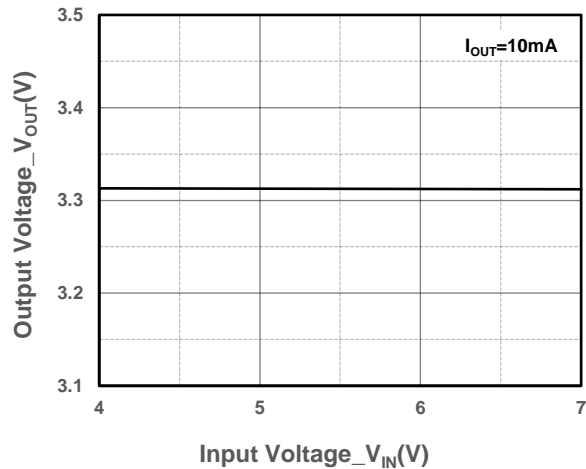


AF6226 Series

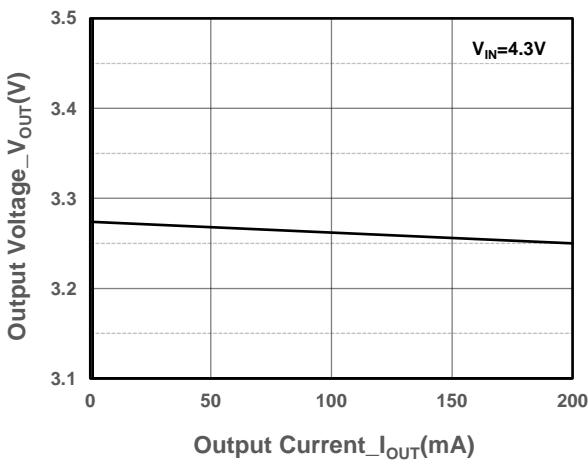
➤ Typical Characteristics (Unless otherwise specified, $T_A=25^\circ\text{C}$, $V_{IN}=V_{OUT}+1\text{V}$, $C_{IN}=C_{OUT}=1\mu\text{F}$)



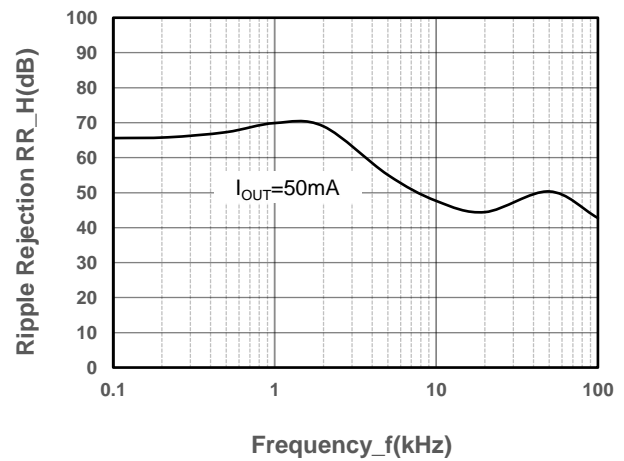
Quiescent Current vs. Input Voltage



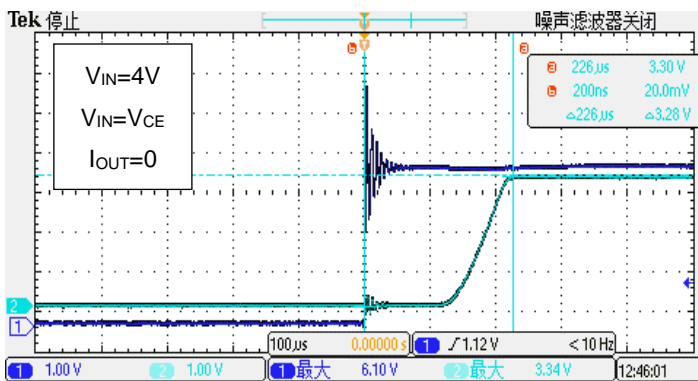
Output Voltage vs. Input Voltage



Output Voltage vs. Input Voltage



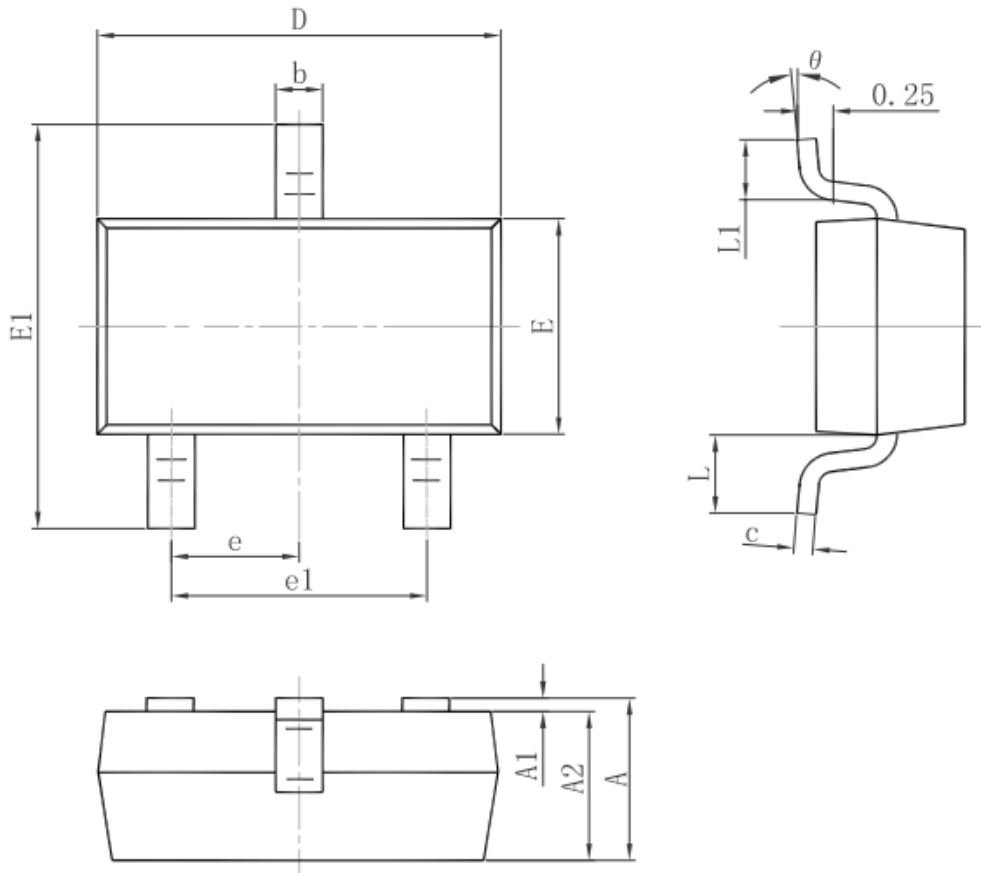
PSRR



Startup Time

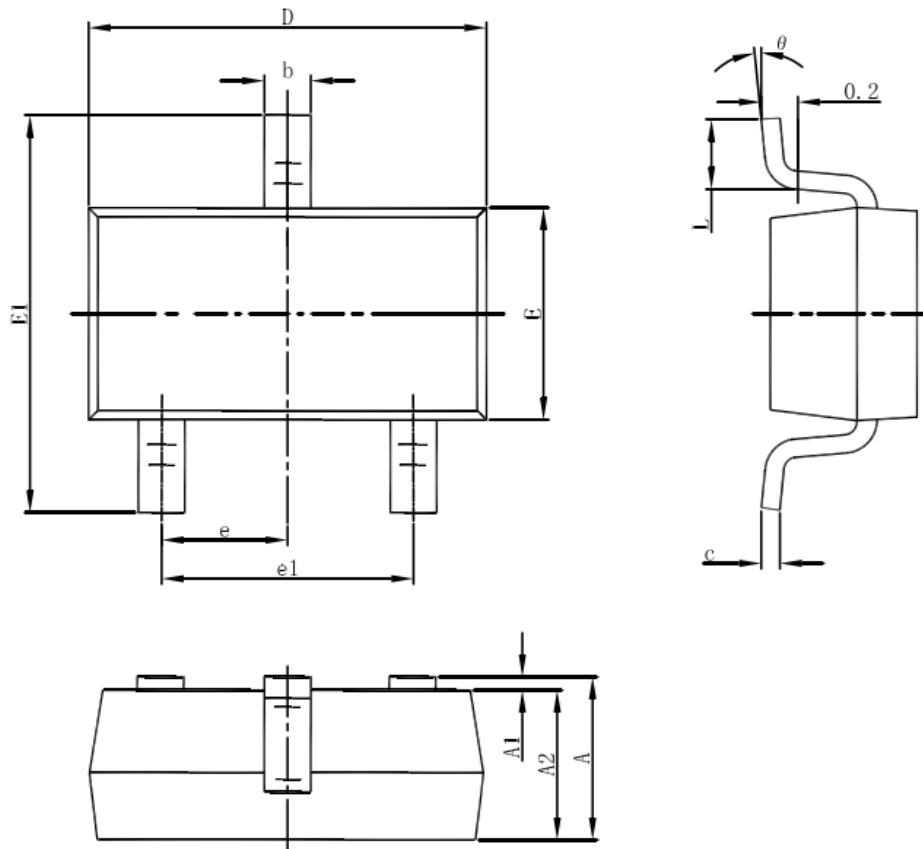
➤ Package Information

SOT-23



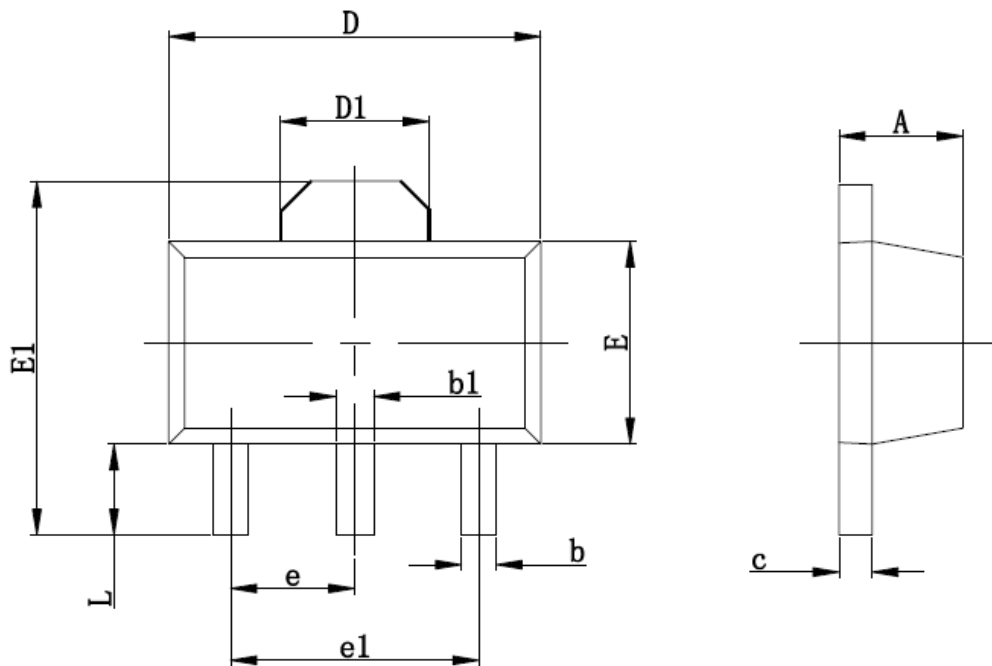
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23-3



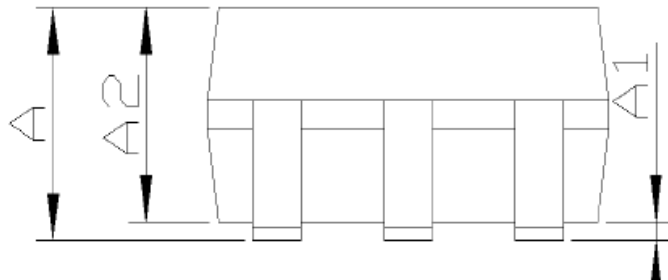
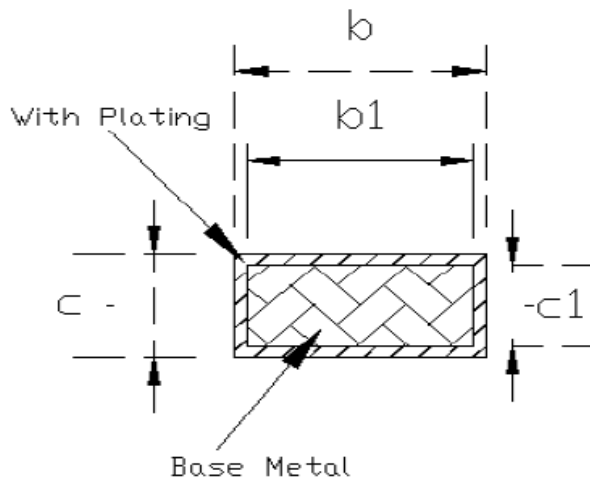
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

SOT-89

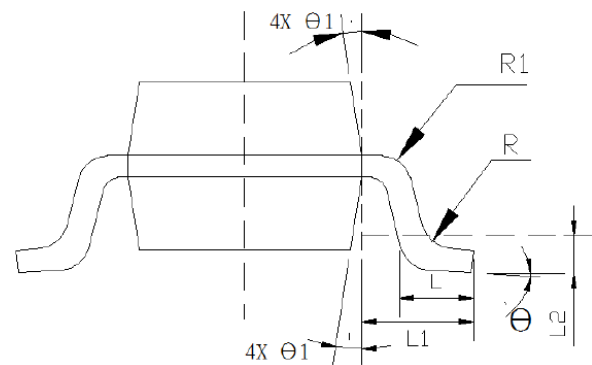
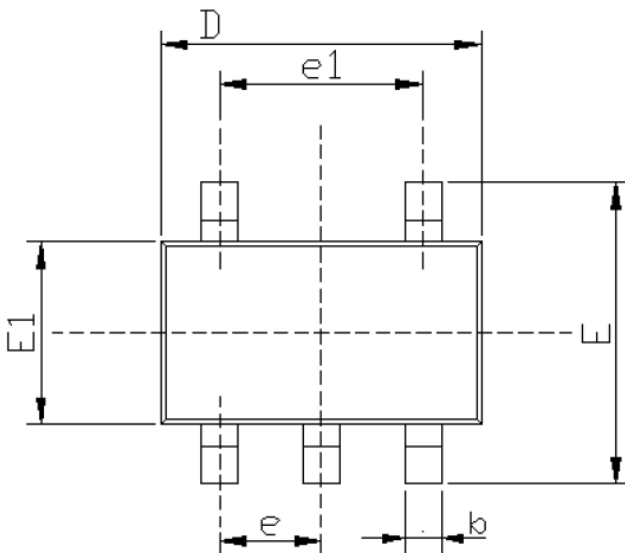


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.350	0.520	0.013	0.197
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF		0.061 REF	
E	2.350	2.550	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP		0.060TYP	
e1	3.000 TYP		0.118TYP	
L	0.900	1.100	0.035	0.047

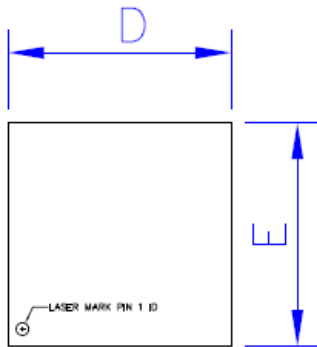
SOT-23-5L



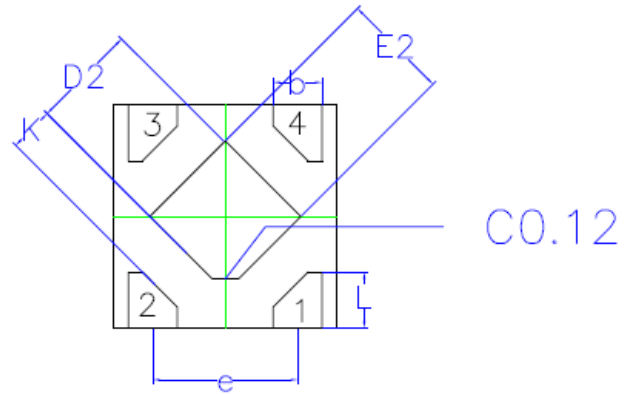
Common Dimensions (Units of Measure=Millimeter)			
SYMBOL	MINIMUM	NOMINAL	MAXIMUM
A	-	-	1.35
A1	0	-	0.15
A2	1.00	1.10	1.20
b	0.35	-	0.45
b1	0.32	-	0.38
c	0.14	-	0.20
c1	0.14	0.15	0.16
D	2.82	2.92	3.02
E	2.60	2.80	3.00
E1	1.526	1.626	1.726
e	0.90	0.95	1.00
e1	1.80	1.90	2.00
L	0.35	0.45	0.60
L1	0.6 REF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



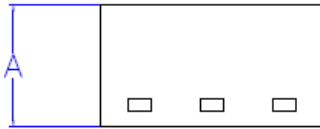
DFN1010-4L



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	—	—



AF6226 Series

➤ Order Information

V _{OUT} (V)	SOT-23			SOT-23-3		
	Device	Marking	Shipping	Device	Marking	Shipping
1.2	AF6226-12N	2612	Tape and Reel, 3K	AF6226-12M	2612	Tape and Reel, 3K
1.8	AF6226-18N	2618		AF6226-18M	2618	
2.5	AF6226-25N	2625		AF6226-25M	2625	
2.8	AF6226-28N	2628		AF6226-28M	2628	
3.0	AF6226-30N	2630		AF6226-30M	2630	
3.3	AF6226-33N	2633		AF6226-33M	2633	
3.6	AF6226-36N	2636		AF6226-36M	2636	
5.0	AF6226-50N	2650		AF6226-50M	2650	
V _{OUT} (V)	SOT-89			SOT-23-5L		
	Device	Marking	Shipping	Device	Marking	Shipping
1.2	AF6226-12P	2612	Tape and Reel, 1K	AF6226-12C	2612	Tape and Reel, 3K
1.8	AF6226-18P	2618		AF6226-18C	2618	
2.5	AF6226-25P	2625		AF6226-25C	2625	
2.8	AF6226-28P	2628		AF6226-28C	2628	
3.0	AF6226-30P	2630		AF6226-30C	2630	
3.3	AF6226-33P	2633		AF6226-33C	2633	
3.6	AF6226-36P	2636		AF6226-36C	2636	
5.0	AF6226-50P	2650		AF6226-50C	2650	
V _{OUT} (V)	DFN1010-4L					
	Device	Marking	Shipping			
1.2	AF6226-12D	1.2	Tape and Reel, 10K			
1.8	AF6226-18D	1.8				
2.5	AF6226-25D	2.5				
2.8	AF6226-28D	2.8				
3.0	AF6226-30D	3.0				
3.3	AF6226-33D	3.3				
3.6	AF6226-36D	3.6				
5.0	AF6226-50D	5.0				



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