Precision adjustable shunt regulator in a SOT-23 Plastic Package.

/ Absolute Maximum Ratings(Ta=25)

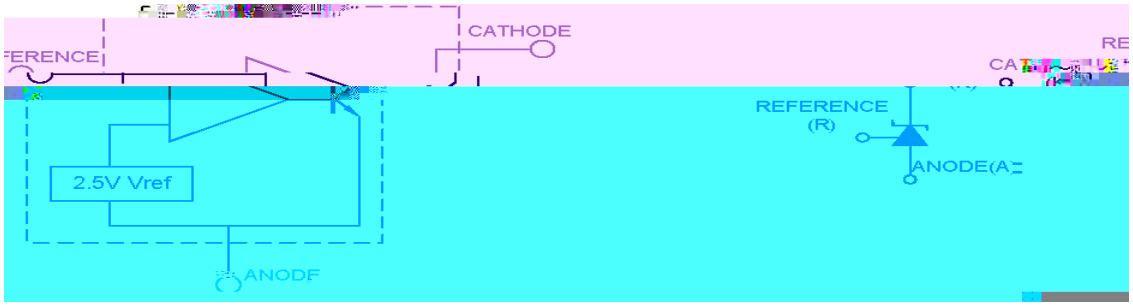
Parameter	Symbol	Rating	Unit
Cathode to Anode Voltage	V_{KA}	37	V
Cathode Current Range, Continuous	I_K	-100 +100	mA
Reference Input Current Range, Continuous	I_{REF}	0.05 +10	mA
Power Dissipation	P_D	370	mW
Operating Ambient Temperature	T_{amb}	-40 125	
Junction Temperature	T_j	160	
Storage Temperature Range	T_{stg}	-65 150	

/ Electrical Characteristics(Ta=25)

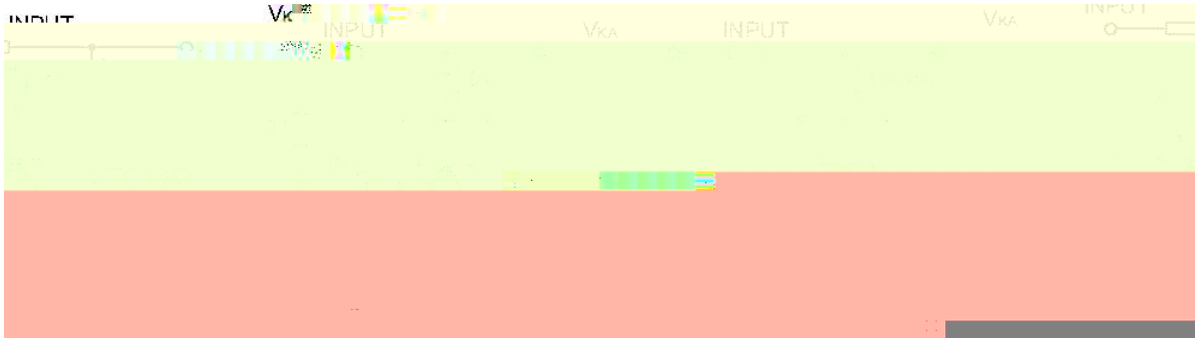
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reference Input voltage	V_{REF}	$V_{KA}=V_{REF}$ I_K=10mA(A=0.4%)	2.490	2.500	2.510	V
		$V_{KA}=V_{REF}$ I_K=10mA(B=0.8%)	2.480	2.500	2.520	V
Deviation of Reference Input Voltage Over-Temperature	V_{REF}/T	$V_{KA}=V_{REF}$ I_K=10mA T_A=-25 85		4.5	17	mV
Ratio of Change in Reference Input Voltage to the Change in Cathode Voltage	V_{REF}/ V_{KA}	I_K=10mA V_{KA} =10V to V_{REF}		-1	-2.7	mV/V
		I_K=10mA V_{KA} =36V to 10V		-0.45	-2.0	mV/V
Reference Input current	I_{REF}	I_K=10mA R_1=10Ω R_2=open		1.0	4.0	μA
Deviation of Reference Input Current Over Full Temperature Range	I_{REF}/T	I_K=10mA R_1=10KΩ, R_2=open T_A=-40 125		0.4	1.2	μA
Minimum Cathode Current for Regulation	$I_{K(min)}$	$V_{KA}=V_{REF}$		0.4	1	mA
Off-state cathode current	$I_{K(off)}$	V_{KA}=36V V_{REF}=0V		0.05	1.0	μA
Dynamic impedance	$\|Z_{KA}\|$	$V_{KA}=V_{REF}$ I_K=1mA to 100mA f≤1.0KHz		0.15	0.5	Ω

& Test circuits&Typical Application

BLOCK DIAGRAM:



TEST CIRCUITS:



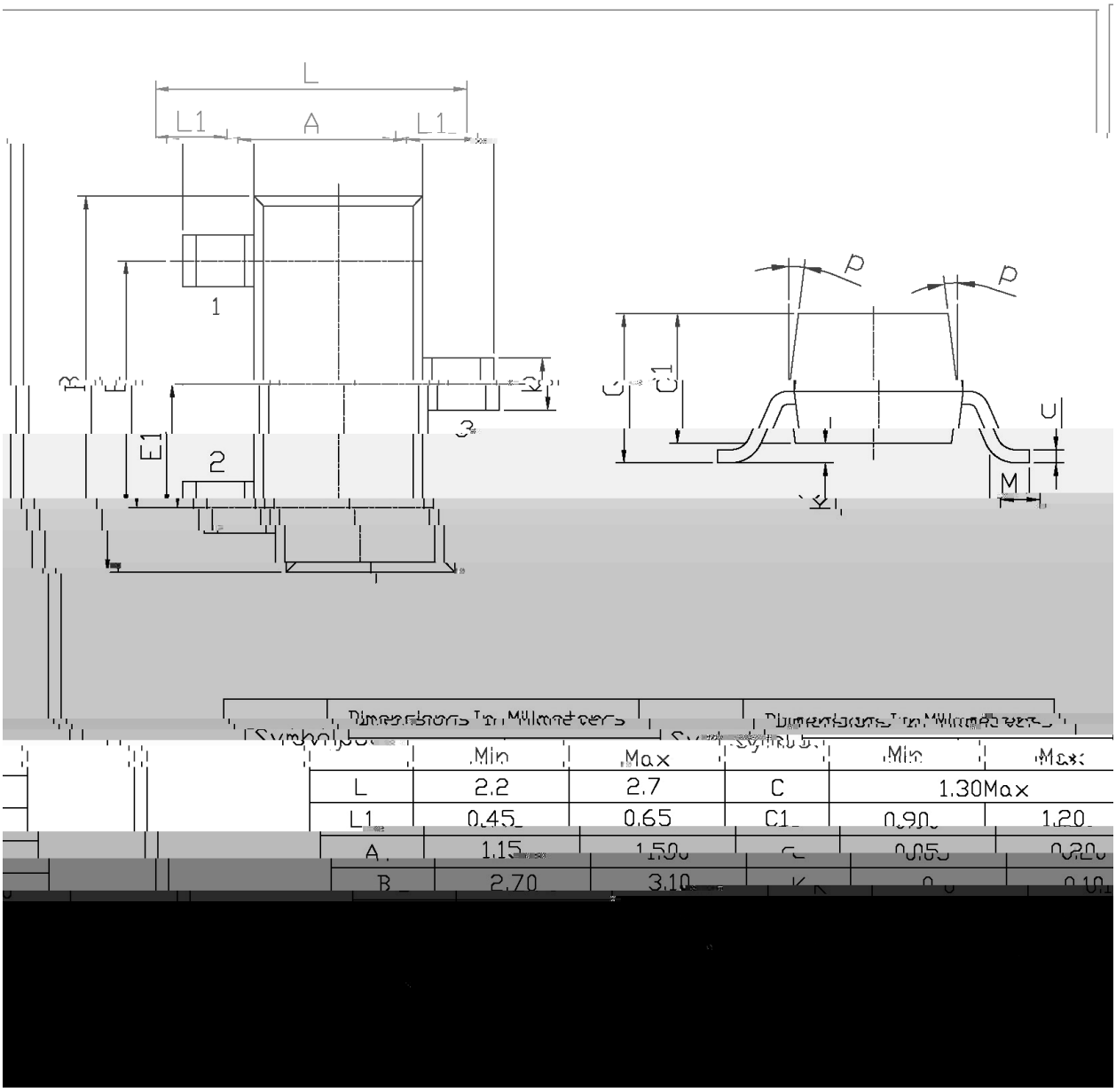
Test Circuit For VKA=VREF Test Circuit for VKA≥VREF Test Circuit For IKA(OFF)

TYPICAL APPLICATION:

Shutdown Regulator Higher-current Shunt

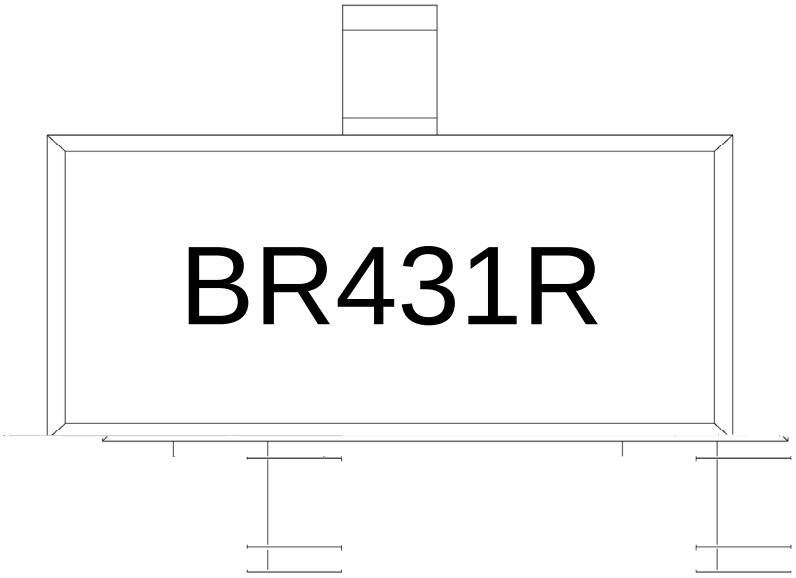
/ Package Dimensions

SOT-23 单位：mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	θ	0	0.10

/ Marking Instructions



Note:

BR: Company Code.

431: Product Type.

R: It represents the opposite arrangement of R and K to BR431M.

BR431RM
Rev.A Apr.-2018