



Micro Commercial Components



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Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Output voltage can be adjusted to 36V
- Trapping current capability is 1 to 100 mA
- The effective temperature compensation in the working range of full temperature
- Low dynamic output impedance, its typical value is 0.2 Ω
- Low output noise voltage
- Fast on-state response
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

Parameter	Symbol	Value	Unit
Input Voltage	V_I	37	V
Operating Temperature	T_{OPR}	0---70	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55---+150	$^{\circ}\text{C}$

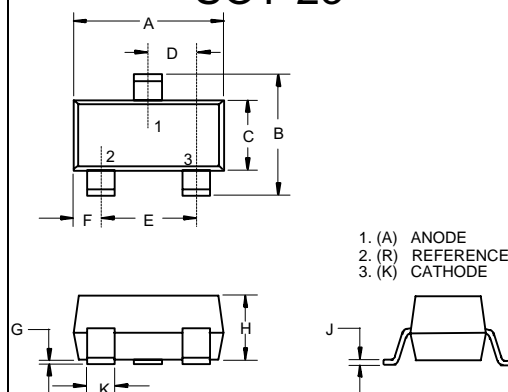
Electrical Characteristics @ 25 $^{\circ}\text{C}$ Unless Otherwise Specified

Parameter	Sym	Min	Typ	Max	Test conditions
Reference Input Voltage	V_{ref}	2.45V	2.50V	2.55V	$V_{KA}=V_{REF}$, $I_{KA}=10\text{mA}$
Deviation of reference input voltage	$\Delta V_{ref}/\Delta T$		4.5mV	17mV	$V_{KA}=V_{REF}$, $I_{KA}=10\text{mA}$ $T_{min} \leq T_a \leq T_{max}$
Ratio of Change in Reference Input Voltage to the Change in Cathode Voltage	$\Delta V_{ref}/\Delta V_{KA}$		-1.0	-2.7	$\Delta V_{KA}=10V \sim V_{ref}$ $\Delta V_{KA}=36V \sim 10V$ $I_{KA}=10\text{mA}$
Reference Input Current	I_{ref}		1.5uA	4uA	$I_{KA}=10\text{mA}$, $R1=10K\Omega$ $R2=\infty$
Deviation of Reference Input Current Over Full Temperature Range	$\Delta I_{ref}/\Delta T$		0.4uA	1.2uA	$I_{KA}=10\text{mA}$, $R1=10K\Omega$ $R2=\infty$ $T_A=\text{full Temperature}$
Minimum Cathode Current for Regulation	$I_{KA}(\text{min})$		0.45mA	1.0mA	$V_{KA}=V_{REF}$
Off-State Cathode Current	$I_{KA}(\text{OFF})$		0.05uA	1.0uA	$V_{KA}=36V$, $V_{REF}=0V$
Dynamic Impedance	Z_{KA}		0.15 Ω	0.5 Ω	$V_{KA}=V_{REF}$, $I_{KA}=1$ to 100mA, $f \leq 1.0\text{KHz}$

TL431V

Adjusttable Accurate Reference Source

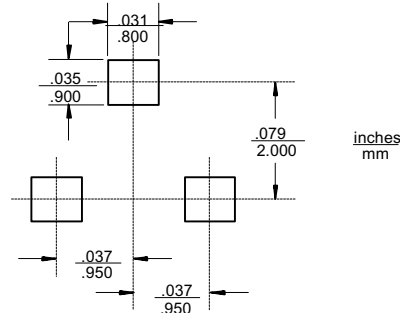
SOT-23



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout



www.mccsemi.com



TM

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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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