

## CMJ0130 thru CMJH180 0.13mA thru 18mA Current Limiting Diodes in the SOD-123FL package



SOD-123FL

Central Semiconductor's **CMJ series** of silicon field effect current regulator diodes is designed for applications requiring a constant current over a wide voltage range. These devices are manufactured in the epoxy molded, low profile SOD-123FL case. Special selections of  $I_P$  (regulator current) are available for critical applications.

### Features:

- High reliability
- Special selections available
- Through hole devices available

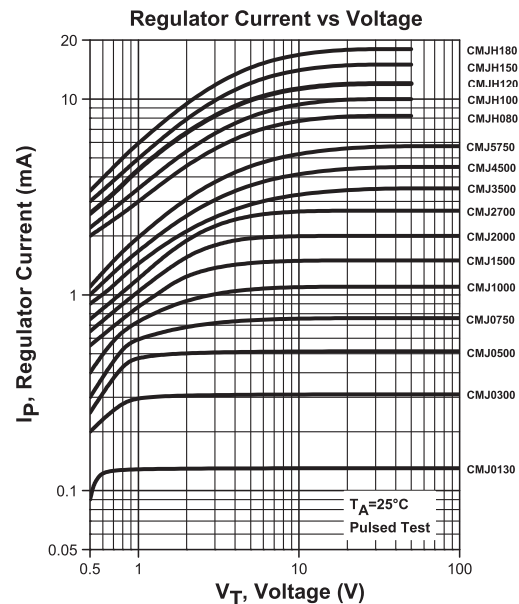
### Applications:

- Test equipment
- Solid State Lighting (SSL)
- Security devices
- Industrial controllers

### Benefits:

- Single device solution
- Industry standard package
- Wide range of regulation currents

### Typical Electrical Characteristics



### Maximum Ratings: ( $T_A=25^\circ\text{C}$ )

	Symbol	Units
Peak Operating Voltage (CMJ0130 THRU CMJ5750)	$P_{OV}$	100 V
Peak Operating Voltage (CMJH080 THRU CMJH180)	$P_{OV}$	50 V
Power Dissipation	$P_D$	500 mW
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150 $^\circ\text{C}$
Thermal Resistance	$\Theta_{JA}$	250 $^\circ\text{C/W}$

Type	Electrical Characteristics ( $T_A = 25^\circ\text{C}$ )							Marking Code
	Regulator Current (Note 1) $I_P$ @ $V_T=25\text{V}$			Minimum Dynamic Impedance $Z_T$ @ $V_T=25\text{V}$	Minimum Knee Impedance $Z_K$ @ $V_K=6.0\text{V}$	Maximum Limiting Voltage $V_L$ @ $I_L=0.8 \times I_P$ MIN	Temperature Coefficient (Note 2) TC	
	MIN (mA)	NOM (mA)	MAX (mA)	(M $\Omega$ )	(k $\Omega$ )	(V)	(%/ $^\circ\text{C}$ )	
CMJ0130	0.05	0.13	0.21	6.0	2,000	0.6	+2.10 to +0.10	101
CMJ0300	0.20	0.31	0.42	4.0	1,000	0.8	+0.40 to -0.20	301
CMJ0500	0.40	0.515	0.63	2.0	500	1.1	+0.15 to -0.25	501
CMJ0750	0.60	0.76	0.92	1.0	200	1.4	0.0 to -0.32	701
CMJ1000	0.88	1.1	1.32	0.65	100	1.7	-0.10 to -0.37	102
CMJ1500	1.28	1.5	1.72	0.45	70	2.0	-0.13 to -0.40	152
CMJ2000	1.68	2.0	2.32	0.35	50	2.3	-0.15 to -0.42	202
CMJ2700	2.28	2.69	3.1	0.30	30	2.7	-0.18 to -0.45	272
CMJ3500	3.0	3.55	4.1	0.25	20	3.2	-0.20 to -0.47	352
CMJ4500	3.9	4.5	5.1	0.20	10	3.7	-0.22 to -0.50	452
CMJ5750	5.0	5.75	6.5	0.05	5.0	4.5	-0.25 to -0.53	562
CMJH080	6.56	8.2	9.84	0.32	15	3.1	-0.25 to -0.45	822
CMJH100	8.0	10	12	0.17	6.0	3.5	-0.25 to -0.45	103
CMJH120	9.6	12	14.4	0.08	3.0	3.8	-0.25 to -0.45	123
CMJH150	12	15	18	0.03	2.0	4.3	-0.25 to -0.45	153
CMJH180	16	18	20	0.02	1.8	4.6	-0.25 to -0.45	183

Notes: 1) Pulsed Method: Pulse Width (ms) = 27.5 divided by  $I_P$  NOM (mA)  
2) The Temperature Coefficient is measured between +25 $^\circ\text{C}$  and +50 $^\circ\text{C}$ .

Use QR reader for direct link to product web page.

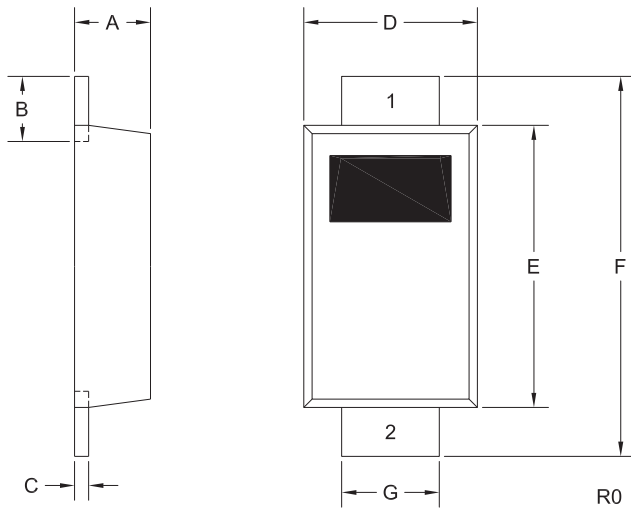
weblink scan



# CMJ0130 thru CMJH180

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## Mechanical Drawing - SOD-123FL



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.024	0.031	0.60	0.80
B	0.020	0.028	0.50	0.70
C	0.003	0.007	0.08	0.18
D	0.059	0.067	1.50	1.70
E	0.094	0.110	2.40	2.80
F	0.130	0.146	3.30	3.70
G	0.031	0.039	0.80	1.00

SOD-123FL (REV:R0)

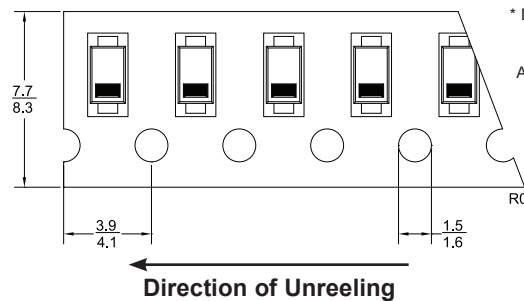
### Lead Code:

- 1) Cathode
- 2) Anode

## Tape Dimensions and Orientation

(Dimensions in mm)

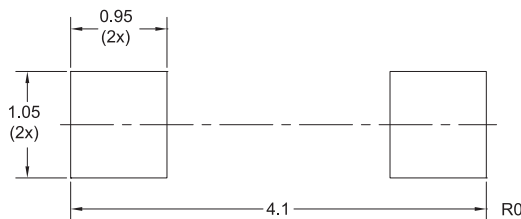
Tape Width: 8mm



\* Devices are taped in accordance with Electronic Industries Association Standard EIA-481-1-A

## Mounting Pad Geometry

(Dimensions in mm)



## Samples



To order samples of this device visit:  
[www.centrasemi.com/info/CMJ](http://www.centrasemi.com/info/CMJ)

## Literature



Order your selection guide today.  
Visit: [web.centrasemi.com/search/sample.php](http://web.centrasemi.com/search/sample.php)

## Packaging Base / Ordering Information

Reel Size	Quantity	Central Item No.	Central Item No.
7"	3,000	CMJ0130 TR	CMJ3500 TR
		CMJ0300 TR	CMJ4500 TR
		CMJ0500 TR	CMJ5750 TR
		CMJ0750 TR	CMJH080 TR
		CMJ1000 TR	CMJH100 TR
		CMJ1500 TR	CMJH120 TR
		CMJ2000 TR	CMJH150 TR
		CMJ2700 TR	CMJH180 TR

## Reel Packing Information

Reel Size	Reels per Box (Maximum)	Parts per Box (Maximum)	Box Dimensions		Shipping Weight (Max.)	
			INCH	CM	LB	KG
7"	8	24,000	9x9x5	23x23x13	3	2
	17	51,000	9x9x9	23x23x23	6	3
	40	120,000	21x9x9	53x23x23	13	6
	108	324,000	27x9x17	69x23x43	34	16

Sample devices available upon request. To order samples of this device visit: [www.centrasemi.com/info/CMJ](http://www.centrasemi.com/info/CMJ)

**Central Semiconductor Corp.** Innovative Discrete Semiconductors

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(631) 435-1110 or visit:  
[www.centrasemi.com](http://www.centrasemi.com)