CMJ0130 THRU **CMJH180**

SURFACE MOUNT SILICON **CURRENT LIMITING DIODE**





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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMJ0130 series types are silicon field effect current regulator diodes 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 Ip (regulator current) are available for critical applications.

MARKING: SEE MARKING CODES ON ELECTRICAL **CHARACTERISTICS TABLE**

FEATURES:

- High Reliability
- Superior Lot to Lot Consistency
- Special Selections Available
- Leaded Devices Available

MAXIMUM RATINGS: (T _A =60°C)	SYMBOL		UNITS
Peak Operating Voltage (CMJ0130 THRU CMJ5750)	Pov	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 _{stq}	-65 to +150	°C
Thermal Resistance	Θ_{JA}	180	°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

Regulator Current (Note 1) Type		Minimum Dynamic Impedance Z _T @ V _T =25V	Minimum Knee Impedance Z _K @ V _K =6.0V	Maximum Limiting Voltage V _L @ I _L = 0.8 x I _P MIN	Temperature Coefficient (Note 2)	Marking Code		
	MIN mA	NOM mA	MAX mA	MΩ	kΩ	V	%/°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 Ip NOM (mA)
2) The Temperature Coefficient is measured between + 25°C and +50°C.

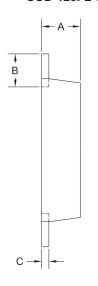
R3 (23-July 2014)

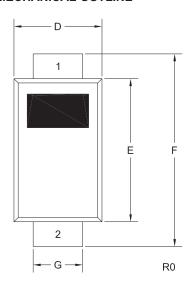
CMJ0130 THRU CMJH180





SOD-123FL CASE - MECHANICAL OUTLINE





LEAD CODE:

- 1) Cathode
- 2) Anode

MARKING: SEE ELECTRICAL CHARACTERISTICS TABLE

DIMENSIONS							
	INCHES		MILLIMETERS				
SYMBOL	MIN	MAX	MIN	MAX			
Α	0.024	0.031	0.60	0.80			
В	0.020	0.028	0.50	0.70			
С	0.003	0.007	0.08	0.18			
D	0.059	0.067	1.50	1.70			
Е	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)

CMJ0130 THRU CMJH180

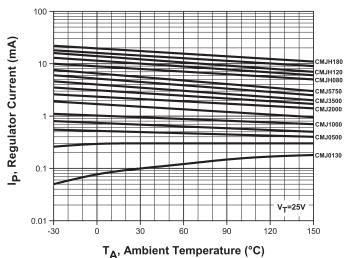




TYPICAL ELECTRICAL CHARACTERISTICS

Regulator Current vs Voltage 20 CMJH180 CMJH150 CMJH120 10 CMJH100 **CMJH080** Ip, Regulator Current (mA) CMJ4500 CMJ2700 CMJ1500 CMJ1000 CMJ0750 CMJ0300 CMJ0130 T_A=25°C Pulsed Test 0.05 100 V_T, Voltage (V)

Nominal Regulator Current vs Temperature



R3 (23-July 2014)

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PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- · Inventory bonding
- · Consolidated shipping options

- · Custom bar coding for shipments
- · Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

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- SPICE models
- · Custom electrical curves
- · Environmental regulation compliance
- · Customer specific screening
- · Up-screening capabilities

- · Special wafer diffusions
- PbSn plating options
- · Package details
- · Application notes
- · Application and design sample kits
- Custom product and package development

CONTACT US

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