



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Center Tap and Doubler, Standard and Fast Recovery Rectifiers

DESCRIPTION

Standard and fast recovery rectifier assemblies available in center tap or doubler configurations in electrically isolated aluminum casing.

Important: For the latest information, visit our website <http://www.microsemi.com>.

FEATURES

- Current ratings to 15 amps
- V_{RWM} from 100 to 600 volts (see [part nomenclature](#) for all options)
- 150 °C junction temperature
- Surge ratings to 150 amps
- Recovery times to 500 ns
- RoHS compliant versions available

APPLICATIONS / BENEFITS

- Electrically isolated aluminum case
- Controlled avalanche characteristics

MAXIMUM RATINGS

Parameters/Test Conditions	Symbol	Value	Unit	
Junction and Storage Temperature	T_J and T_{STG}	-65 to +150	°C	
Thermal Resistance Junction-to-Case	$R_{\theta JC}$	6.0	°C/W	
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	20	°C/W	
Forward Surge Current (Peak): @ $T_C = 100$ °C	I_{FSM}	150	A	
Maximum Average DC Output Current:	I_O	@ $T_C = 55$ °C	15	A
		@ $T_C = 100$ °C	10.5	
Solder Temperature @ 10 s		260	°C	



(Actual appearance may vary)

ND Package

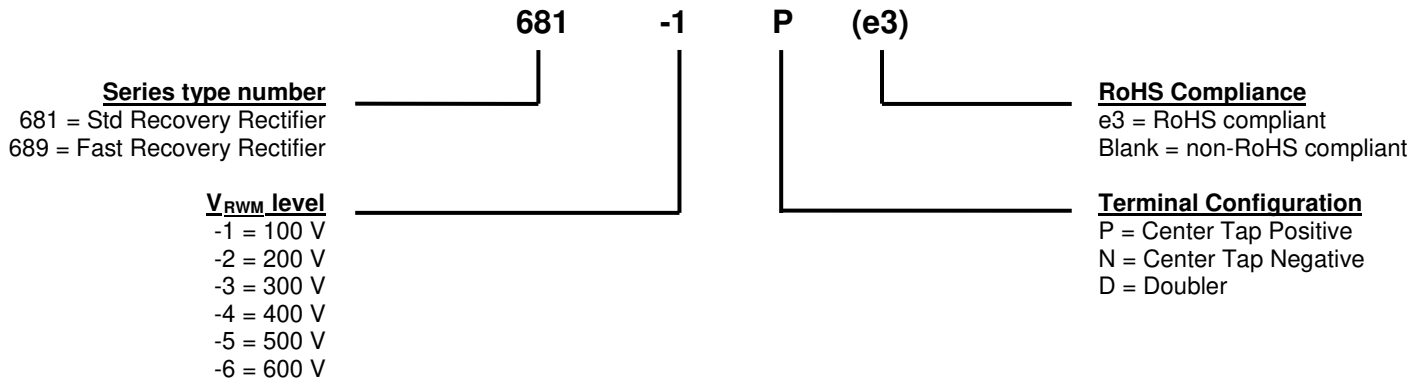
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MECHANICAL and PACKAGING

- CASE: Aluminum
- TERMINALS: Tin/lead or RoHS compliant matte tin
- MARKING: Alternating current input: AC
Cathode positive output: +
Anode negative: -
Part number is printed on the body
- WEIGHT: Approximately 30 grams
- See [Package Dimensions](#) on last page.

PART NOMENCLATURE

SYMBOLS & DEFINITIONS

Symbol	Definition
I_{FSM}	Surge Peak Forward Current: The forward current including all nonrepetitive transient currents but excluding all repetitive transients (ref JESD282-B)
I_O	Average Rectified Output Current: The Output Current averaged over a full cycle with a 50 Hz or 60 Hz sine-wave input and a 180 degree conduction angle.
V_F	Forward Voltage: A positive dc anode-cathode voltage the device will exhibit at a specified forward current.
I_R	Reverse Current: The dc current flowing from the external circuit into the cathode terminal at the specified voltage V_R .
V_{RWM}	Working Peak Reverse Voltage: The peak voltage excluding all transient voltages (ref JESD282-B). Also sometimes known historically as PIV.
t_{rr}	Reverse Recovery Time: The time interval between the instant the current passes through zero when changing from the forward direction to the reverse direction and a specified decay point after a peak reverse current occurs.

ELECTRICAL CHARACTERISTICS

PART NUMBER	MAX FORWARD VOLTAGE PER LEG V_F (Note 1)	MAX REVERSE PEAK CURRENT $I_R @ V_{RRM}$		MAX REVERSE RECOVERY TIME t_{rr} ($I_F = 1.0 A$, $I_{RM} = 1.0 A$, $I_{R(REC)} = 0.5 A$)
	@ 25 °C	@ 25 °C	@ 100 °C	
	Volts	μA	μA	ns
681	1.2 @ 10 A	10	200	-
689	1.2 @ 10 A	10	200	500

NOTES: 1. MAX WORKING PEAK REVERSE VOLTAGE (V_{RWM}) numbering:

PART NUMBER		WORKING PEAK REVERSE VOLTAGE V_{RWM}	MINIMUM BREAKDOWN VOLTAGE $V_{(BR)}$
		Volts	Volts
681-1	689-1	100	110
681-2	689-2	200	220
681-3	689-3	300	330
681-4	689-4	400	440
681-5	689-5	500	550
681-6	689-6	600	660

2. Pulse test: Pulse width 300 μ sec, duty cycle 2%.

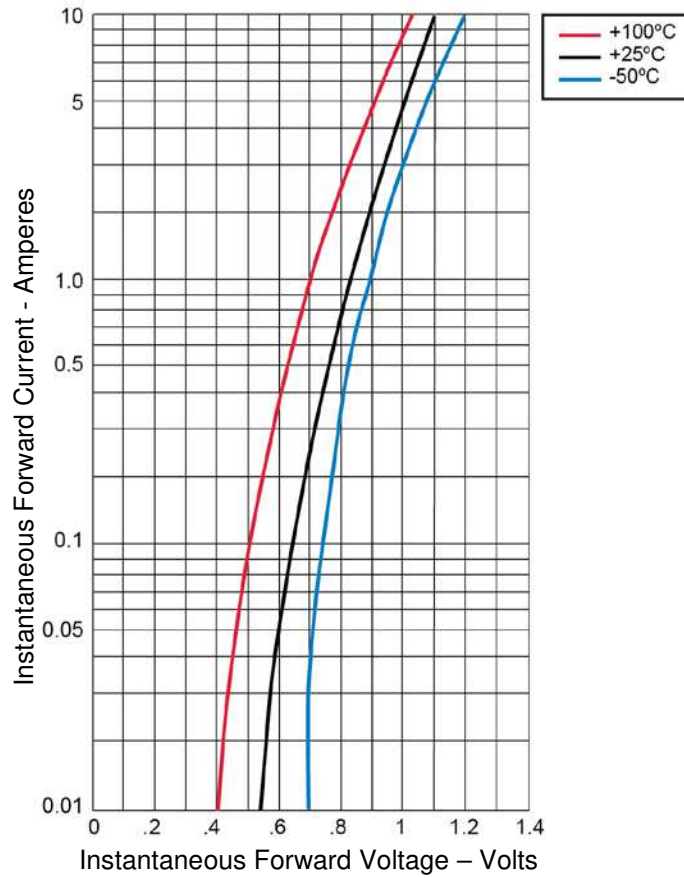
GRAPHS


FIGURE 1
Typical Forward Characteristics – Per Leg

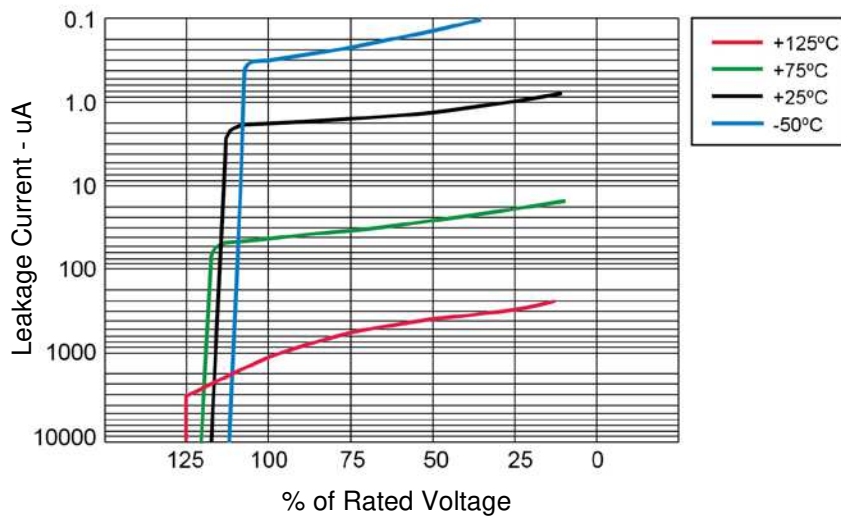


FIGURE 2
Typical Reverse Leakage Current – Per Leg

GRAPHS (continued)

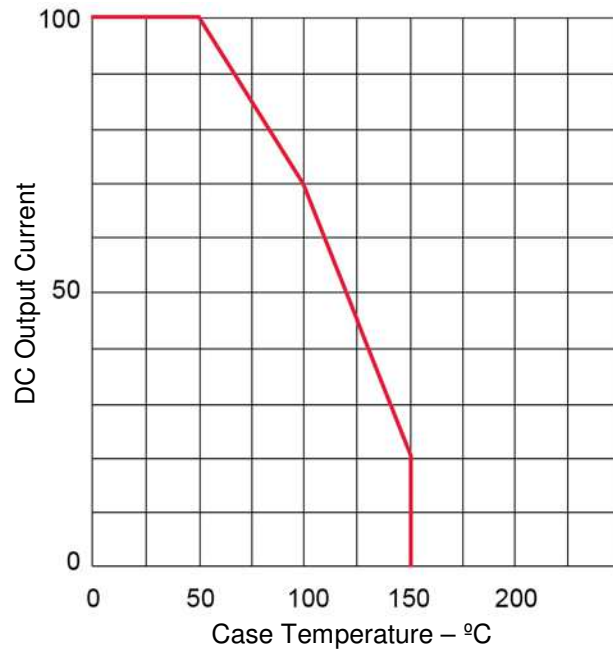
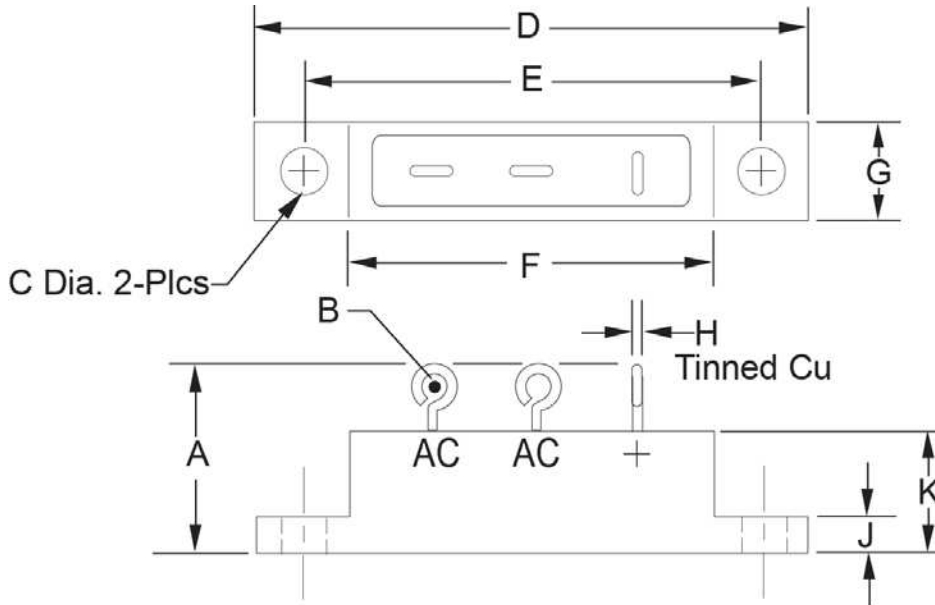


FIGURE 3
Current Derating

PACKAGE DIMENSIONS



Notes: Orientation of terminals shown for "D". For "P" or "N" center terminal is 90° from the AC terminals.

Ltr	Dimensions		Dimensions	
	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	-	0.660		16.76
B	0.09 TYP		2.29 TYP	
C (dia)	0.165	0.175	4.19	4.45
D	2.240	2.260	56.90	57.40
E	1.870	1.880	47.50	47.75
F	1.480	1.490	37.59	37.85
G	0.334	0.354	8.48	8.99
H	0.40 TYP		1.02 TYP	
J	0.115	0.135	2.92	3.43
K	0.302	0.322	7.67	8.18

PACKAGE DIMENSIONS

