

POWER DISCRETES
Description

Quick reference data

$V_{BR\ MIN} = 6.12 - 180V$

$V_{RWM} = 5.2 - 152V$

$V_c(max) = 11 - 273V$

$I_{(BR)}\ 1N6102 - 1N6137 = 5mA - 175mA$

Features

- ◆ Low dynamic impedance
- ◆ Hermetically sealed non-cavity construction
- ◆ 500 watt peak pulse power
- ◆ 1.5W continuous

These products are qualified to MIL-PRF-19500/516 and are preferred parts as listed in MIL-HDBK-5961. They can be supplied fully released as JANTX and JANTXV versions.

Electrical Specifications

Electrical specifications @ $T_A = 25^\circ C$ unless otherwise specified.

Device Type	Minimum Breakdown Voltage $V_{(BR)} @ I_{(BR)}$	Test Current $I_{(BR)}$	Working Pk. Reverse Voltage V_{RWM}	Maximum Reverse Current I_{R1}	Maximum Clamping Voltage $V_c @ I_p$	Maximum Pk. Pulse Current I_p $T_p = 1mS$	Temp. Coeff. of $V_{(BR)}$ $\alpha_{(VZ)}$	Maximum Reverse Current $I_{R2} @ 150^\circ C$
	Volts	mA	Volts	μA	Volts	Amps	%/ $^\circ C$	μA
1N6102	6.12	175	5.2	100	11.0	45.4	0.05	4,000
1N6103	6.75	175	5.7	50	11.8	42.4	0.06	750
1N6103A	7.13	175	5.7	50	11.2	44.6	0.06	750
1N6104	7.38	150	6.2	20	12.7	39.4	0.06	500
1N6104A	7.79	150	6.2	20	12.1	41.3	0.06	500
1N6105	8.19	150	6.9	20	14.0	35.7	0.06	300
1N6105A	8.65	150	6.9	20	13.4	37.3	0.06	300
1N6106	9.0	125	7.6	20	15.2	32.9	0.07	200
1N6106A	9.50	125	7.6	20	14.5	34.5	0.07	200
1N6107	9.9	125	8.4	20	16.3	30.7	0.07	200
1N6107A	10.45	125	8.4	20	15.6	32.0	0.07	200
1N6108	10.8	100	9.1	20	17.7	28.2	0.07	150
1N6108A	11.4	100	9.1	20	16.9	29.6	0.07	150
1N6109	11.7	100	9.9	20	19.0	26.3	0.08	150
1N6109A	12.35	100	9.9	20	18.2	27.5	0.08	150
1N6110	13.5	75	11.4	20	21.9	22.8	0.08	100
1N6110A	14.25	75	11.4	20	21.0	23.8	0.08	100
1N6111	14.4	75	12.2	20	23.4	21.4	0.08	100
1N6111A	15.2	75	12.2	20	22.3	22.4	0.08	100

POWER DISCRETES

Electrical Specifications

Electrical specifications @ $T_A = 25^\circ\text{C}$ unless otherwise specified.

Device Type	Minimum Breakdown Voltage $V_{(BR)} @ I_{(BR)}$	Test Current $I_{(BR)}$	Working Pk. Reverse Voltage V_{RWM}	Maximum Reverse Current I_{R1}	Maximum Clamping Voltage $V_C @ I_P$	Maximum Pk. Pulse Current I_P $T_P = 1\text{mS}$	Temp. Coeff. of $V_{(BR)}$ $\alpha_{(VZ)}$	Maximum Reverse Current $I_{R2} @ 150^\circ\text{C}$
	Volts	mA	Volts	μA	Volts	Amps	$\% / ^\circ\text{C}$	μA
1N6112	16.2	65	13.7	1	26.3	19.0	0.085	100
1N6112A	17.1	65	13.7	1	25.1	19.9	0.085	100
1N6113	18.0	65	15.2	1	29.0	17.2	0.085	100
1N6113A	19.0	65	15.2	1	27.7	18.0	0.085	100
1N6114	19.8	50	16.7	1	31.9	15.7	0.085	100
1N6114A	20.9	50	16.7	1	30.5	16.4	0.085	100
1N6115	21.6	50	18.2	1	34.8	14.4	0.09	100
1N6115A	22.8	50	18.2	1	33.3	15.0	0.09	100
1N6116	24.3	50	20.6	1	39.2	12.8	0.09	100
1N6116A	25.7	50	20.6	1	37.4	13.4	0.09	100
1N6117	27.0	40	22.8	1	43.6	11.5	0.09	100
1N6117A	28.5	40	22.8	1	41.6	12.0	0.09	100
1N6118	29.7	40	25.1	1	47.9	10.4	0.095	100
1N6118A	31.4	40	25.1	1	45.7	10.9	0.095	100
1N6119	32.4	30	27.4	1	52.3	9.6	0.095	100
1N6119A	34.2	30	27.4	1	49.9	10.0	0.095	100
1N6120	35.1	30	29.7	1	56.2	8.9	0.095	100
1N6120A	37.1	30	29.7	1	53.6	9.3	0.095	100
1N6121	38.7	30	32.7	1	62.0	8.1	0.095	100
1N6121A	40.9	30	32.7	1	59.1	8.5	0.095	100
1N6122	42.3	25	35.8	1	67.7	7.4	0.095	100
1N6122A	44.7	25	35.8	1	64.6	7.7	0.095	100
1N6123	45.9	25	38.8	1	73.5	6.8	0.095	100
1N6123A	48.5	25	38.8	1	70.1	7.1	0.095	100
1N6124	50.4	20	42.6	1	80.7	6.2	0.095	100
1N6124A	53.2	20	42.6	1	77.0	6.5	0.095	100

POWER DISCRETES

Electrical Specifications

Electrical specifications @ $T_A = 25^\circ\text{C}$ unless otherwise specified.

Device Type	Minimum Breakdown Voltage $V_{(BR)} @ I_{(BR)}$	Test Current $I_{(BR)}$	Working Pk. Reverse Voltage V_{RWM}	Maximum Reverse Current I_{R1}	Maximum Clamping Voltage $V_C @ I_P$	Maximum Pk. Pulse Current $I_P @ T_P = 1\text{mS}$	Temp. Coeff. of $V_{(BR)}$ $\alpha_{(VZ)}$	Maximum Reverse Current $I_{R2} @ 150^\circ\text{C}$
	Volts	mA	Volts	μA	Volts	Amps	$\%/^\circ\text{C}$	μA
1N6125	55.8	20	47.1	1	89.3	5.6	0.1	100
1N6125A	58.9	20	47.1	1	85.3	5.9	0.1	100
1N6126	61.2	20	51.7	1	98.0	5.1	0.1	100
1N6126A	64.6	20	51.7	1	97.1	5.1	0.1	100
1N6127	67.5	20	56.0	1	108.1	4.6	0.1	100
1N6127A	71.3	20	56.0	1	103.1	4.8	0.1	100
1N6128	73.8	15	62.2	1	118.2	4.2	0.1	100
1N6128A	77.9	15	62.2	1	112.8	4.4	0.1	100
1N6129	81.9	15	69.2	1	131.1	3.8	0.1	100
1N6129A	86.5	15	69.2	1	125.1	4.0	0.1	100
1N6130	90.0	12	76.0	1	144.1	3.5	0.1	100
1N6130A	95.0	12	76.0	1	137.6	3.6	0.1	100
1N6131	99.0	12	83.6	1	158.5	3.2	0.1	100
1N6131A	104.5	12	83.6	1	151.3	3.3	0.1	100
1N6132	108.0	10	91.2	1	172.9	2.9	0.1	100
1N6132A	114.0	10	91.2	1	165.1	3.0	0.1	100
1N6133	117.0	10	98.8	1	187.3	2.7	0.105	100
1N6133A	123.5	10	98.8	1	178.8	2.8	0.105	100
1N6134	135.0	8	114.0	1	216.2	2.3	0.105	100
1N6134A	142.5	8	114.0	1	206.3	2.4	0.105	100
1N6135	144	8	121.6	1	228.8	2.2	0.105	100
1N6135A	152	8	121.6	1	218.4	2.3	0.105	100
1N6136	162	5	136.8	1	257.4	1.9	0.11	100
1N6136A	171	5	136.8	1	245.7	2.0	0.11	100
1N6137	180	5	152.0	1	286.0	1.7	0.11	100
1N6137A	190	5	152.0	1	273.0	1.8	0.11	100

POWER DISCRETES

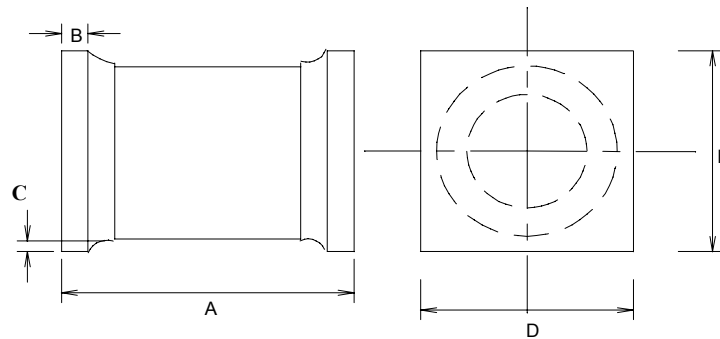
Ordering Information

Part Number	Description
1N6102US thru 1N6137US 1N6103AUS thru 1N6137AUS	Surface Mount(US) ⁽¹⁾

Note:

(1) Available in trays or tape and reel packaging. Please consult factory for quantities.

Outline Drawing



	Dimensions	
	1N6102US - 1N6137US 1N6103AUS - 1N6137AUS	
	Inches	
	MIN	MAX
A	0.2	0.225
B	0.019	0.028
C	0.003	-
D	0.137	0.148

Contact Information

Semtech Corporation
Power Discretes Products Division
200 Flynn Road, Camarillo, CA 93012
Phone: (805)498-2111 FAX (805)498-3804