

# 8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR  
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C (W/°C)	MAX. FREE AIR @ 25°C (W)	M A X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. hFE			BIAS V <sub>cb</sub> (V)	I <sub>c</sub> (A)	MIN	MAX	f <sub>ae</sub> (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG Y200 s/a TO200 Ser.	# E O A D E	
					I <sub>c</sub> (A)	I <sub>b</sub> (A)	V <sub>cb</sub> (V)	V <sub>eb</sub> (V)	V <sub>ceo</sub> (V)	I <sub>co</sub> (mA)	V <sub>cb</sub> (V)	V <sub>cb</sub> (V)											V <sub>cb</sub> (V)
					(A)	(A)	(V)	(V)	(V)	(mA)	(V)	(V)											(V)
1	2N1031	1.2	90	#J	15	1.5	50	25	30	15m	2.0	10	20	60	100m	15u	AΔ	T041	C0				
2	2N1031A	1.2	90	#J	15	1.5	50	25	40	15m	2.0	10	20	60	100m	15u	AΔ	T041	C0				
3	2N1031B	1.2	90	#J	15	1.5	90	25	70	15m	2.0	10	20	60	100m	15u	AΔ	T041	C0				
4	2N1031C	1.2	90	#J	15	1.5	100	25	80	15m	2.0	10	20	60	100m	15u	AΔ	T041	C0				
5	2N1032	1.2	90	#J	15	1.5	50	25	30	15m	2.0	10	50	100	100m	15u	AΔ	T041	C0				
6	2N1032A	1.2	90	#J	15	1.5	60	25	40	15m	2.0	10	50	100	100m	15u	AΔ	T041	C0				
7	2N1032B	1.2	90	#J	15	1.5	90	25	70	15m	2.0	10	50	100	100m	15u	AΔ	T041	C0				
8	2N1032C	1.2	90	#J	15	1.5	100	25	80	15m	2.0	10	50	100	100m	15u	AΔ	T041	C0				
9	2N1099†	1.2	30	#J	15	4.0	80	40	80	8.0m	2.0	5.0	35	70	58m	15u		T036	C0				
10	2N1100†	1.2	30	#J	15	4.0	100	80	80	8.0m	2.0	5.0	25	50	58m	15u		T036	C0				
11	JAN2N1120	1.2	90	#J	15	5.0	80	40	40	10m	2.0	10	20	50	70m		Δ	T041	C0				
12	2N1146	1.2	87	#S	15	5.0	40	30	38	15m	2.0	5.0	60	150	66m			T03	C0				
13	2N1146A	1.2	87	#S	15	5.0	60	30	58	15m	2.0	5.0	60	150	66m			T03	C0				
14	2N1146B	1.2	87	#S	15	5.0	80	30	78	15m	2.0	5.0	60	150	66m			T03	C0				
15	2N1146C	1.2	87	#S	15	5.0	100	30	98	15m	2.0	5.0	60	150	66m			T03	C0				
16	2N1147	1.2	87	#S	15	5.0	40	30	38	15m	2.0	5.0	60	150	66m			T041	C0				
17	2N1147A	1.2	87	#S	15	5.0	60	30	58	15m	2.0	5.0	60	150	66m			T041	C0				
18	2N1147B	1.2	87	#S	15	5.0	80	30	78	15m	2.0	5.0	60	150	66m			T041	C0				
19	2N1147C	1.2	87	#S	15	5.0	100	30	98	15m	2.0	5.0	60	150	66m			T041	C0				
20	2N1162	1.2	90	#J	25	25	50	20	25	15m	1.0	25	15	65	32m	1.0kΔ		T03	C0				
21	2N1162A	1.2	90	#C	25	25	50	25	20	15m	1.0	25	15	65	32m	3.0kΔ		T03	C0				
22	2N1163	1.2	90	#J	25	25	50	20	25	15m	1.0	25	15	65	32m	1.0kΔ		T041	C0				
23	2N1163A	1.2	90	#C	25	25	50	25	20	15m	1.0	25	15	65	32m	3.0kΔ		T03	C0				
24	2N1164	1.2	90	#J	25	25	80	25	35	15m	1.0	25	15	65	32m	1.0kΔ		T03	C0				
25	2N1164A	1.2	90	#C	25	25	80	40	40	15m	1.0	25	15	65	32m	3.0kΔ		T041	C0				
26	2N1165	1.2	90	#J	25	25	80	25	35	15m	1.0	25	15	65	32m	1.0kΔ		T041	C0				
27	JAN2N1165	1.2	90	#J	25	25	80	40	60	15m	1.0	5.0	25	125	40m	3.0kΔ		T041	C0				
28	2N1165A	1.2	90	#C	25	25	80	40	40	15m	1.0	25	15	65	32m	3.0kΔ		T03	C0				
29	2N1166	1.2	90	#J	25	25	100	30	45	15m	1.0	25	15	65	32m	1.0kΔ		T03	C0				
30	2N1166A	1.2	90	#C	25	25	100	50	50	15m	1.0	25	15	65	32m	3.0kΔ		T03	C0				
31	2N1167	1.2	90	#J	25	25	100	30	45	15m	1.0	25	15	65	32m	1.0kΔ		T041	C0				
32	2N1167A	1.2	90	#C	25	25	100	50	50	15m	1.0	25	15	65	32m	3.0kΔ		T03	C0				
33	2N1182	1.2	106	#J	5.0	1.0	50	12	60	12m	2.0	500m	30	85	450m	5.0kΔ		T03	C0				
34	2N1358†	1.2	30	#J	15	1.0	80	60	60	8.0m	2.0	1.2	40	80	100kΔ	15u		T036	C0				
35	2N1359	1.2	30	#C	3.0	3.0	50	25	40	20m	4.0	1.0	35	90	500m			T03	C0				
36	2N1360	1.2	30	#C	3.0	3.0	50	25	40	20m	4.0	1.0	60	140	500m			T03	C0				
37	2N1362	1.2	30	#C	3.0	3.0	100	50	75	20m	4.0	1.0	35	90	500m			T03	C0				
38	2N1363	1.2	30	#C	3.0	3.0	100	50	75	20m	4.0	1.0	60	140	500m			T03	C0				
39	2N1364	1.2	30	#C	3.0	3.0	120	60	100	20m	4.0	1.0	35	90	500m			T03	C0				
40	2N1365	1.2	30	#C	3.0	3.0	120	60	100	20m	4.0	1.0	60	140	500m			T03	C0				
41	2N1412	1.2	87	#J	15	4.0	100	60	75	8.0m	2.0	5.0	25	50	28m	20u	Δ	T036	C0				
42	2N1419†	1.2	87	#S	15	4.0	80	50	75	15m	2.0	25	40	100	28m			T03	C0				
43	2N1518	1.2	70	#J	25	4.0	50	30	40	100u	4.0	15	15	60	28m	A	T036	C0					
44	2N1519	1.2	70	#J	25	4.0	80	30	60	100u	4.0	15	15	60	28m	A	T036	C0					
45	2N1520	1.2	70	#J	35	6.0	50	30	40	100u	4.0	15	17	68	17m	A	T036	C0					
46	2N1521	1.2	70	#J	35	6.0	80	30	60	100u	4.0	15	25	100	10m	A	T036	C0					
47	2N1522	1.2	70	#J	50	8.0	50	30	40	100	4.0	15	25	100	10m	A	T036	C0					
48	2N1523	1.2	70	#J	50	8.0	80	30	60	100	4.0	15	25	100	10m	A	T036	C0					
49	2N1529	1.2	90	#C	5.0	5.0	40	20	30	200u	2.0	3.0	20	40	2.0k	500m		T03	C0				
50	2N1530	1.2	90	#C	5.0	5.0	40	20	45	200u	2.0	3.0	20	40	2.0k	500m		T03	C0				
51	2N1531	1.2	90	#C	5.0	5.0	80	40	60	200u	2.0	3.0	20	40	2.0k	500m		T03	C0				
52	2N1532	1.2	90	#C	5.0	5.0	100	50	75	200u	2.0	3.0	20	40	2.0k	500m		T03	C0				
53	2N1533	1.2	90	#C	5.0	5.0	120	60	90	200u	2.0	3.0	35	70	2.0k	400m		T03	C0				
54	2N1534	1.2	90	#C	5.0	5.0	40	20	30	200u	2.0	3.0	35	70	2.0k	400m		T03	C0				
55	2N1535	1.2	90	#C	5.0	5.0	60	30	45	200u	2.0	3.0	35	70	2.0k	400m		T03	C0				
56	2N1536	1.2	90	#C	5.0	5.0	80	40	60	200u	2.0	3.0	35	70	2.0k	400m		T03	C0				
57	2N1537	1.2	90	#C	5.0	5.0	100	50	75	200u	2.0	3.0	35	70	2.0k	400m		T03	C0				
58	2N1538	1.2	90	#C	5.0	5.0	120	60	90	200u	2.0	3.0	50	100	1.0k	100m		T03	C0				
59	2N1539	1.2	90	#C	5.0	5.0	40	20	30	200u	2.0	3.0	50	100	3.0kΔ	200m		T03	C0				
60	2N1539A	1.2	90	#C	5.0	5.0	40	20	20	20m	2.0	3.0	50	100	1.0k	100m		T03	C0				
61	2N1540	1.2	90	#C	5.0	5.0	60	30	45	20m	2.0	3.0	50	100	3.0kΔ	200m		T03	C0				
62	2N1540A	1.2	90	#C	5.0	5.0	60	30	30	200u	2.0	3.0	50	100	1.0k	100m		T03	C0				
63	2N1541	1.2	90	#C	5.0	5.0	80	40	60	20m	2.0	3.0	50	100	3.0kΔ	200m		T03	C0				
64	2N1541A	1.2	90	#C	5.0	5.0	80	40	40	20m	2.0	3.0	50	100	1.0k	100m		T03	C0				
65	2N1542	1.2	90	#C	5.0	5.0	100	50	50	20m	2.0	3.0	50	100	3.0kΔ	200m		T03	C0				
66	2N1542A	1.2	90	#C	5.0	5.0	100	50	50	200u	2.0	3.0	50	100	1.0k	100m		T03	C0				
67	2N1543	1.2	90	#C	5.0	5.0	120	60	90	20m	2.0	3.0	75	150	1.0kΔ	66m		T03	C0				
68	2N1544	1.2	90	#C	5.0	5.0	40	20	20	20m	2.0	3.0	75	150	3.0kΔ	66m		T03	C0				
69	2N1544A	1.2	90	#C	5.0	5.0	60	30	30	20m	2.0	3.0	75	150	1.0kΔ	66m		T03	C0				
70	2N1545	1.2	90	#C	5.0	5.0	60	30	30	20m	2.0	3.0	75	150	3.0kΔ	66m		T03	C0				
71	2N1545A	1.2	90	#C	5.0	5.0	80	40	40	20m	2.0	3.0	75	150	1.0kΔ	66m		T03	C0				
72	2N1546	1.2	90	#C	5.0	5.0	80	40	40	20m	2.0	3.0	75	150	3.0kΔ	66m		T03	C0				
73	2N1546A	1.2	90	#C	5.0	5.0	80	40	40	20m	2.0	3.0	75	150	1.0kΔ	66m		T03	C0				
74	2N1547	1.2	90	#C	5.0	5.0	100	50	50	20m	2.0	3.0	75	150	3.0kΔ	66m		T03	C0				
75	2N1547A	1.2	90	#C	5.0	5.0	100	50	50	20m	2.0	3.0	75	150	1.0kΔ	66m		T03	C0				
76	2N1548	1.2	90	#C	5.0	5.0	120	60	60	20m	2.0	3.0	75	150	1.0kΔ	66m		T03	C0				
77	2N1549	1.2	90	#J	15	15	40	20	20	20m	2.0	10	10	30	100								