

Diodes (leaded)

For complete information and data sheets please refer to our Data Book I and II, Small Signal Semiconductor Edition 03.92.

RF-Schottky Diodes for Professional Applications

Type	Frequency Band GHz	Maximum Ratings		Characteristics ($T_A = 25\text{ °C}$)						Package
		V_R V	I_F mA	F_{SSB} dB	at f GHz	$V_{BR (min)}$ V	C_T pF	$C_{T (max)}$ pF	V_F V	

Medium Barrier

■ BAT 14-014	... 4.0 (S)	3	100	5.5	3.0	3	0.25	0.35	0.42	3.0	T1
■ BAT 14-034	... 4.0 (S)	3	100	6.5	3.0	3	0.25	0.35	0.42	4.0	T1
■ BAT 14-044	... 8.0 (C)	3	100	5.5	6.0	3	0.20	0.25	0.43	3.5	T1
■ BAT 14-064	... 8.0 (C)	3	100	6.5	6.0	3	0.20	0.25	0.43	4.5	T1
■ BAT 14-074	... 12.0 (X)	3	50	5.5	9.3	3	0.17	0.20	0.44	4.5	T1
■ BAT 14-094	... 12.0 (X)	3	50	6.5	9.3	3	0.17	0.20	0.44	5.5	T1
■ BAT 14-104	... 18.0 (Ku)	3	50	6.0	16.0	3	0.13	0.15	0.46	5.5	T1
■ BAT 14-114	... 18.0 (Ku)	3	50	7.0	16.0	3	0.13	0.15	0.46	7.0	T1
■ BAT 14-124	... 40.0 (Ka)	3	50	9.0	16.0	3	0.10	0.12	0.47	8.0	T1

Low Barrier

■ BAT 15-014	... 4.0 (S)	3	100	5.5	3	3	0.25	0.35	0.26	3.0	T1
■ BAT 15-044	... 8.0 (C)	3	100	5.5	6	3	0.20	0.25	0.28	3.5	T1
■ BAT 15-074	... 12.4 (X)	3	50	5.5	9.3	3	0.17	0.20	0.29	4.5	T1
■ BAT 15-104	... 18.0 (Ku)	3	50	6.0	16	3	0.13	0.15	0.30	5.5	T1
■ BAT 15-124	... 40.0 (Ka)	3	50	9.0	16	3	0.10	0.12	0.31	8.0	T1

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PIN Diodes for Professional Applications

Type	Maximum Ratings			Characteristics ($T_A = 25\text{ °C}$)				Package
	V_R V	I_{FRM} A	T_j °C	$C_T(\max)$ pF	r_f Ω	τ_L ns	t_s ns	
■ BXY 42BA-3	50	5	175	0.24	1.5	40	4	T1
■ BXY 43A	150	10	175	0.20	1.2	250	15	T1
■ BXY 43B	150	20	175	0.28	1.0	350	20	T1
■ BXY 43C	150	20	175	0.40	1.0	350	25	T1
■ BXY 44K	200	20	175	0.40	3.5	500	50	T1

Varactor (Tuning) Diodes

Type	Maximum Ratings		Characteristics ($T_A = 25\text{ °C}$)						Package	
	V_R V	I_F mA	C_T at V_R pF	at V_R V	C_T at V_R pF	at V_R V	C_{Ratio}	I_R at V_R nA		at V_R V
■ BB 112	12	50	440 - 520	1	16.50 - 29.00	8.5	≥ 18.00	50	10	TO-92a
■ BB 304	32	50	42 - 47.5	2	25.00	8.0	1.65 - 1.75	20	30	TO-92b

Hyperabrupt Varactors

Type	Maximum Ratings		Characteristics ($T_A = 25\text{ °C}$)				Package	
	V_R V	T_j °C	$V_{BR(\min)}$ V	C_T at V_R pF	at V_R V	$C_{T4}/C_{T20(\min)}$		$Q_{(\min)}$
■ BBY 35F	22	175	22	8.5 ... 10.0	4	3.5	250	T1

Abrupt Varactors

Type	Maximum Ratings		Characteristics ($T_A = 25\text{ °C}$)					Package
	V_R V	T_j °C	$V_{BR(\min)}$ V	C_T pF	$C_{T0}/C_{T25(\min)}$	$C_{T0}/C_{T120(\min)}$	$Q_{(\min)}$	
■ BBY 24-S1	120	175	120	12.0 ... 16.0	—	8.5	200	P
■ BBY 25-S1	120	175	120	16.0 ... 20.0	—	9.0	200	P
■ BBY 26-S1	120	175	120	20.0 ... 24.0	—	9.5	200	P
■ BBY 27-S2	140	175	140	36.0 ... 40.0	—	9.5	200	P

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Transistors (leaded)

Type N = NPN P = PNP	Maximum Ratings			Characteristics ($T_A = 25\text{ °C}$)									Package
	V_{CE0} V	I_C mA	P_{tot} mW	f_T MHz	I_{CB0} at nA	V_{CB0} V	h_{FE} at	I_C mA	V_{CE} V	V_{CEsat} V	at I_C mA	I_B mA	

High-Voltage Transistors

■ BF 420	N	300	50	830	100	≤ 10	200	≥ 50	25	20	≤ 20.0	25	–	TO-92d
■ BF 421	P	300	50	830	100	≤ 10	200	≥ 50	25	20	≤ 20.0	25	–	TO-92d
■ BF 422	N	250	50	830	100	≤ 10	200	≥ 50	25	20	≤ 20.0	25	–	TO-92d
■ BF 423	P	250	50	830	100	≤ 10	200	≥ 50	25	20	≤ 20.0	25	–	TO-92d
■ BFP 22	N	200	200	625	70	≤ 100	160	≥ 50	30	10	≤ 0.5	20	2	TO-92c
■ BFP 23	P	200	200	625	70	≤ 100	160	≥ 50	30	10	≤ 0.4	20	2	TO-92c
■ BFP 25	N	300	200	625	70	≤ 100	250	≥ 40	30	10	≤ 0.4	20	2	TO-92c
■ BFP 26	P	300	200	625	70	≤ 100	250	≥ 40	30	10	≤ 0.5	20	2	TO-92c
■ MPSA 42	N	300	500	625	70	100	200	≥ 40	30	10	≤ 0.5	20	2	TO-92c
■ MPSA 43	N	200	500	625	70	100	160	≥ 40	30	10	≤ 0.4	20	2	TO-92c
■ MPSA 92	P	300	500	625	70	100	200	≥ 25	30	10	≤ 0.5	20	2	TO-92c
■ MPSA 93	P	200	500	625	70	100	160	≥ 30	30	10	≤ 0.4	20	2	TO-92c

Darlington Transistors

■ BC 516	P	30	500	625	200	≤ 100	30	≥ 30000	20	2	≤ 1.0	100	0.1	TO-92d
■ BC 517	N	30	500	625	150	≤ 100	30	≥ 30000	20	2	≤ 1.0	100	0.1	TO-92d
■ BC 617	N	40	500	625	150	≤ 100	40	≥ 20000	200	5	≤ 1.1	200	0.2	TO-92d
■ BC 618	N	55	500	625	150	≤ 100	60	≥ 10000	200	5	≤ 1.1	200	0.2	TO-92d
■ BC 875	N	45	1000	800	150	≤ 100	60	≥ 2000	500	10	≤ 1.3	500	0.5	TO-92d
■ BC 876	P	45	1000	800	150	≤ 100	60	≥ 2000	500	10	≤ 1.3	500	0.5	TO-92d
■ BC 877	N	60	1000	800	150	≤ 100	80	≥ 2000	500	10	≤ 1.3	500	0.5	TO-92d
■ BC 878	P	60	1000	800	150	≤ 100	80	≥ 2000	500	10	≤ 1.3	500	0.5	TO-92d
■ BC 879	N	80	1000	800	150	≤ 100	90	≥ 2000	500	10	≤ 1.3	500	0.5	TO-92d
■ BC 880	P	80	1000	800	150	≤ 100	90	≥ 2000	500	10	≤ 1.3	500	0.5	TO-92d

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GaAs MMICs Broadband Amplifiers

Type	Maximum Ratings		Characteristics ($T_A = 25\text{ °C}$)						Package
	V_S V	P_{tot} W	I_{op} mA	G dB	ΔG dB	F dB	$P_{-1\text{ dB}}$ dBm	at f MHz	
■ CGY 21	6.0	2	160	21.0	1.5	3.9	19	100 ... 900	TO-12
■ CGY 31	6.0	2	160	18.0	2.0	4.0	19	800 ... 1800	TO-12

RF-Transistors

Type N = NPN P = PNP	Maximum Ratings			Characteristics ($T_A = 25\text{ °C}$)										Package
	V_{CE0} V	I_C mA	P_{tot} mW	f_T GHz	F dB	I_C mA	V_{CE} V	f MHz	G_{PC} dB	I_C mA	V_{CE} V	f MHz		
■ BF 414 P	30	25	300	0.56	3.0	5	10	100	–	–	–	–	TO-92d	
■ BF 506 P	35	30	300	0.55	3.0	2	10	200	–	–	–	–	TO-92d	
■ BF 959 N	20	100	500	1.10	4.0	20	10	200	–	–	–	–	TO-92d	

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General Purpose and Switching Transistors

Type N = NPN P = PNP	Maximum Ratings			Characteristics ($T_A = 25\text{ °C}$)										Package
	V_{CB0} V	I_C mA	P_{tot} mW	f_T MHz	I_{CB0} at nA	V_{CB0} V	h_{FE}	at	I_C mA	V_{CE} V	V_{CEsat} at V	I_C mA	I_B mA	
■ BC 327 P	50	800	625	200	≤ 100	45	100 ... 630*	100	1	≤ 0.70	500	50.0	TO-92d	
■ BC 328 P	30	800	625	200	≤ 100	25	100 ... 630*	100	1	≤ 0.70	500	50.0	TO-92d	
■ BC 337 N	50	800	625	170	≤ 100	45	100 ... 630*	100	1	≤ 0.70	500	50.0	TO-92d	
■ BC 338 N	30	800	625	170	≤ 100	25	100 ... 630*	100	1	≤ 0.70	500	50.0	TO-92d	
■ BC 368 N	25	1000	800	100	≤ 100	25	85 ... 375	500	1	≤ 0.50	1000	100.0	TO-92d	
■ BC 369 P	25	1000	800	100	≤ 100	25	85 ... 375	500	1	≤ 0.50	1000	100.0	TO-92d	
■ BC 635 N	45	1000	800	100	≤ 100	30	40 ... 250	150	2	≤ 0.50	500	50.0	TO-92d	
■ BC 636 P	45	1000	800	100	≤ 100	30	40 ... 250	150	2	≤ 0.50	500	50.0	TO-92d	
■ BC 637 N	60	1000	800	100	≤ 100	30	40 ... 160	150	2	≤ 0.50	500	50.0	TO-92d	
■ BC 638 P	60	1000	800	100	≤ 100	30	40 ... 160	150	2	≤ 0.50	500	50.0	TO-92d	
■ BC 639 N	100	1000	800	100	≤ 100	30	40 ... 160	150	2	≤ 0.50	500	50.0	TO-92d	
■ BC 640 P	100	1000	800	100	≤ 100	30	40 ... 160	150	2	≤ 0.50	500	50.0	TO-92d	
■ BCX 12 N	125	800	625	100	100	100	63	100	1	≤ 1.00	500	50.0	TO-92d	
■ BCX 13 P	125	800	625	120	100	100	63	100	1	≤ 1.00	500	50.0	TO-92d	
■ BCX 58 N	32	100	500	200	≤ 20	32	120 ... 630*	2	5	≤ 0.50	100	2.50	TO-92d	
■ BCX 59 N	45	100	500	200	≤ 20	45	120 ... 630*	2	5	≤ 0.50	100	2.50	TO-92d	
■ BCX 78 P	32	100	500	250	≤ 20	32	120 ... 630*	2	5	≤ 0.60	100	2.50	TO-92d	
■ BCX 79 P	45	100	500	250	≤ 20	45	120 ... 630*	2	5	≤ 0.60	100	2.50	TO-92d	

■ Not for new design