2N3476–2N3581

TYPE	MATERIAL	POLARITY	REPLACEMENT	PAGE NUMBER	USE	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS							
						P_D @ 25°C	Ref Point	T_J °C	V_{CB} (volts)	V_{CE-} (volts)	Subscript	h_{FE} @ I_C (min)	(max)	Units	$V_{CE(SAT)}$ @ I_C (volts)	Units	h_{f-}	Subscript	f_- Units	Subscript
2N3476	S	N			LPA	150W	C	150	150	150	O	700	10K	4.0A	3.5	9.0A	100	E	4.0K	E
2N3477	S	N			LPA	150W	C	150	200	200	O	700	10K	4.0A	3.5	9.0A	100	E	4.0K	E
2N3478	S	N			RFA	0.2W	A	200	30	15	O	25	150	2.0M			25	E	750M	T
2N3479 thru 2N3484	Unijunction Transistors, see Table on Page 1-174																			
2N3485	S	P		8-169	HSS	2.0W	C	200	60	40	O	40	120	0.15A	0.4	0.15A			200M	T
2N3485A	S	P		8-169	HSS	2.0W	C	200	60	60	O	40	120	0.15A	0.4	0.15A			200M	T
2N3486	S	P		8-169	HSS	2.0W	C	200	60	40	O	100	300	0.15A	0.4	0.15A			200M	T
2N3486A	S	P		8-169	HSS	2.0W	C	200	60	60	O	100	300	0.15A	0.4	0.15A			200M	T
2N3487	S	N		7-169	LPA	115W	C	200	80	60	O	20	60	3.0A	0.3	1.0A	20	E	10M	T
2N3488	S	N		7-169	LPA	115W	C	200	100	80	O	20	60	3.0A	0.3	1.0A	20	E	10M	T
2N3489	S	N		7-169	LPA	115W	C	200	120	100	O	15	45	3.0A	0.3	1.0A	20	E	10M	T
2N3490	S	N		7-169	LPA	115W	C	200	80	60	O	40	120	5.0A	0.3	1.0A	40	E	10M	T
2N3491	S	N		7-169	LPA	115W	C	200	100	80	O	40	120	5.0A	0.3	1.0A	40	E	10M	T
2N3492	S	N		7-169	LPA	115W	C	200	120	100	O	30	90	5.0A	0.3	1.0A	40	E	10M	T
2N3493	S	N		8-228	HSS	0.15W	A	200	12	8.0	O	40	120	0.5M	0.15	10*			400M	T
2N3494	S	P		8-230	VID	0.6W	A	200	80	80	O	35		0.1A	0.3	10M	40	E	200M	T
2N3495	S	P		8-230	VID	0.6W	A	200	120	120	O	35		0.1M	0.35	10M	40	E	150M	T
2N3496	S	P		8-230	VID	0.4W	A	200	80	80	O	35		0.1A	0.3	10M	40	E	200M	T
2N3497	S	P		8-230	VID	0.4W	A	200	120	120	O	35		0.1M	0.35	10M	40	E	150M	T
2N3498	S	N		8-232	VID	1.0W	A	200	100	100	O	40	120	0.15A	0.2	10M	50	E	150M	T
2N3499	S	N		8-232	VID	1.0W	A	200	100	100	O	100	300	0.15A	0.2	10M	75	E	150M	T
2N3500	S	N		8-232	VID	1.0W	A	200	150	150	O	40	120	0.15A	0.2	10M	50	E	150M	T
2N3501	S	N		8-232	VID	1.0W	A	200	150	150	O	100	300	0.15A	0.2	10M	75	E	150M	T
2N3502	S	P	2N2905	8-169	HSS	0.7W	A	200	45	45	O	115	300	50M	0.25	50M	135	E	200M	T
2N3503	S	P	2N2905A	8-169	HSS	0.7W	A	200	60	60	O	115	300	50M	0.25	50M	135	E	200M	T
2N3504	S	P	2N2907	8-169	HSS	0.4W	A	200	45	45	O	115	300	50M	0.25	50M	135	E	200M	T
2N3505	S	P	2N2907A	8-169	HSS	0.4W	A	200	60	60	O	115	300	50M	0.25	50M	135	E	200M	T
2N3506	S	N		8-238	HSS	1.0W	A	200	60	40	O	40	200	1.5A	1.0	1.5A			60M	T
2N3507	S	N		8-238	HSS	1.0W	A	200	80	50	O	30	150	1.5A	1.0	1.5A			60M	T
2N3508	S	N		8-240	HSS	0.4W	A	200	40	20	O	40	120	10M	0.25	10M			500M	T
2N3509	S	N		8-240	HSS	0.4W	A	200	40	20	O	100	300	10M	0.25	10M			500M	T
2N3510	S	N		8-243	HSS	0.36W	A	200	40	10	O	25	150	0.15A	0.25	10M	20	E	350M	T
2N3511	S	N		8-243	HSS	0.36W	A	200	40	15	O	30	120	0.15A	0.25	10M	20	E	450M	T
2N3512	S	N	2N2537	8-151	HSS	0.8W	A	200	60	35	O	10		0.5A	1.0	0.5A			250M	T
2N3513	S	N	2N2480A	11-6	DFA	0.25W	A	200	80	40	O	50	200	1.0M	1.2	50M	50	E	50M	T
2N3514	S	N			DFA	0.25W	A	175	80	40	O	50	200	1.0M	1.2	50M	50	E	50M	T
2N3515	S	N		11-39	DFA	0.25W	A	175	80	40	O	50	200	1.0M	1.2	50M	50	E	50M	T
2N3516	S	N			DFA	0.25W	A	200	100	60	O	50	200	1.0M	1.2	50M	50	E	60M	T
2N3517	S	N			DFA	0.25W	A	175	100	60	O	50	200	1.0M	1.2	50M	50	E	60M	T
2N3518	S	N		11-39	DFA	0.25W	A	175	100	60	O	50	200	1.0M	1.2	50M	50	E	60M	T
2N3519	S	N			DFA	0.25W	A	175	60	30	O	150	600	1.0M	1.0	5.0M	150	E	60M	T
2N3520	S	N			DFA	0.25W	A	175	60	30	O	150	600	1.0M	1.0	5.0M	150	E	60M	T
2N3521	S	N			DFA	0.3W	A	200	70	55	O	100	300	10*	1.0	10M			30M	T
2N3522	S	N			DFA	0.25W	A	200	70	55	O	100	300	10*	1.0	10M			30M	T
2N3523	S	N			DFA	0.25W	A	175	70	55	O	100	300	10*	1.0	10M			30M	T
2N3524	S	N			DFA	0.25W	A	175	70	55	O	100	300	10*	1.0	10M			30M	T
2N3525	Thyristor, see Table on Page 1-154																			
2N3526	S	N			VID	0.8W	A	200	130	120	O	30	120	30M	1.0	50M	25	E	40M	T
2N3527	S	P			AFA	0.4W	A	200	30	30	O	25	75	0.1N		0.1N	100	E	5.0M	T
2N3528 thru 2N3541	Thyristors, see Table on Page 1-154																			
2N3543	S	N			HPA	60W	C	200	65	60	O	10	80	4.5A	1.0	4.5A			150M	T
2N3544	S	N		9-78	RFC	0.3W	A	175	25	25	S	25		10M					600M	T
2N3545	S	P			HSS	0.36W	A	200	20	20	O	40	120	10M	0.2	10M			250M	T
2N3546	S	P		8-246	HSS	0.36W	A	200	15	12	O	30	120	10M	0.15	10M			700M	T
2N3547	S	P			LNA	0.36W	A	200	60	60	O	100	500	1.0M	1.0	10M	120	E	45M	T
2N3548	S	P			LNA	0.4W	A	200	60	45	O	100	300	10*	1.0	10M	150	E	60M	T
2N3549	S	P			LNA	0.4W	A	200	60	60	O	100	500	10*	1.0	10M	150	E	60M	T
2N3550	S	P			LNA	0.4W	A	200	60	45	O	200	600	10*	0.9	5.0M	300	E	60M	T
2N3551	S	N			PHS	40W	C	175	115	60	O	20	90	10A	1.0	10A			40M	T
2N3552	S	N			PHS	40W	C	175	140	80	O	20	90	10A	1.0	10A			40M	T
2N3553	S	N		6-69	HPA	7.0W	C	200	65	40	O	10	100	0.25A	1.0	0.25A			400M	T
2N3554	S	N			HSS	0.8W	A	200	60	30	O	25	100	0.75A	0.7	0.75A			150M	T
2N3555 thru 2N3562																				
2N3563	S	N			RFA	0.2W	A	125	30	12	O	20	200	8.0M			20	E	600M	T
2N3564	S	N			RFA	0.2W	A	125	30	15	O	20	500	15M	0.3	20M	20	E	400M	T
2N3565	S	N	MPS6514	5-109	AFA	0.2W	A	125	30	25	O	150	600	1.0M			120	E	40M	T
2N3566	S	N	MPS6514	5-109	AFA	0.3W	A	125	40	30	O	150	600	10M	1.0	0.1A			40M	T
2N3567	S	N	MPS6530	5-118	AFA	0.3W	A	125	80	40	O	40	120	0.15A	0.25	0.15A			60M	T
2N3568	S	N			AFA	0.3W	A	125	80	60	O	40	120	0.15A	0.25	0.15A			60M	T
2N3569	S	N	MPS6531	5-118	AFA	0.3W	A	125	80	40	O	100	300	0.15A	0.25	0.15A			60M	T
2N3570	S	N			RFA	0.2W	A	200	30	15	O	20	150	5.0M			20	E	1.5G	T
2N3571	S	N			RFA	0.2W	A	200	25	15	O	20	200	5.0M			20	E	1.5G	T
2N3572	S	N			RFA	0.2W	A	200	25	13	O	20	300	5.0M			20	E	1.0G	T
2N3573 thru 2N3575																				
2N3576	S	P			HSS	0.36W	A	200	20	15	O	40	120	10M	0.15	10M			400M	T
2N3577	S	N			HPA	85W	C	175	100	80	O	12	60	1.0A	5.25	1.0A	12	E	10M	T
2N3578																				
2N3579	S	P			VID	0.4W	A	200	60	60	O	30	120	1.0M	0.5	5.0M	30	E	80M	T
2N3580	S	P			VID	0.4W	A	200	60	60	O	60	240	1.0M	0.5	5.0M	60	E	80M	T
2N3581	S	P			VID	0.4W	A	200	50	40	O	50	150	0.1M	0.5	5.0M	50	E	30M	T

Datasheet.Live

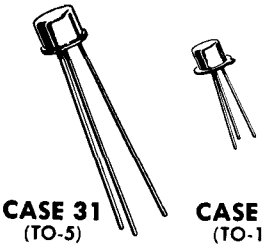
GENERAL PURPOSE SWITCHING AND AMPLIFIER TRANSISTORS (SILICON)

Current versus Voltage

BV_{CEO} Min Volts	OPTIMUM COLLECTOR CURRENT									
	0 to 10 mA		10 mA to 100 mA		100 mA to 500 mA		500 mA to 1.0 A		1.0 A to 3.0 A	
	NPN	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN	PNP
15 ↓ 29	2N916 2N2330 2N2331		2N916 2N1983 2N1984		2N696 2N697 2N718 2N1420 2N2195	2N1991				
30 ↓ 39			2N2218 2N2219 2N2221 2N2222	2N3133 2N3134 2N3135 2N3136	2N2218 2N2219 2N2221 2N2222 2N3299 2N3300 2N3301 2N3302	2N2800 2N2801 2N2837 2N2838 2N3133 2N3134 2N3135 2N3136				
49 ↓ 59	2N758 2N795 2N760 2N915 2N929 2N930 2N3946 2N3947	2N3250 2N3251 MM4048	2N2218A 2N2219A 2N2221A 2N2222A 2N2224 2N3946 2N3947	2N3250 2N3251	2N2194 2N2218A 2N2219A 2N2221A 2N2222A	2N2904 2N2905 2N2906 2N2907 2N3485 2N3486 2N4890	2N2192 2N2193	2N3244 2N3245	2N3506 2N3507	
60 ↓ 79	2N758A 2N759A 2N760A 2N929A 2N930A MM2483 MM2484	2N3798 2N3799 2N3250A 2N3251A	2N910 2N911 2N1990	2N3250A 2N3251A	2N656 2N699	2N2904A 2N2905A 2N2906A 2N2907A 2N3485A 2N3486A				
80 ↓ 99	2N739 2N740	2N3494 2N3496	2N720A 2N1893 2N2405	2N3494 2N3496	2N720A 2N3019 2N3020		2N3019 2N3020			
100 ↓ 149	2N4924	2N3495 2N3497 2N4928	2N3498 2N3499 2N4924	2N3495 2N3497 2N3634 2N3635 2N4928	2N3498 2N3499 2N4924	2N3634 2N3635				
150 ↓ 249	2N3114 2N4925 2N4926	2N4929 2N4930	2N3500 2N3501 2N4925 2N4926	2N3635 2N3637 2N4929 2N4930	2N3500 2N3501 2N4925	2N3636 2N3637				
250 UP	2N3742 2N4927	2N3743 2N4931	2N3742 2N4927	2N3743 2N4931						

2N3494 thru 2N3497 (SILICON)

V_{CEO} = 80-120 V
I_C = 100 mA
f_T = 150-200 MHz



CASE 31 (TO-5) CASE 22 (TO-18)

2N3494 2N3496
2N3495 2N3497

Collector connected to case

PNP silicon annular Star transistors for high voltage switching and DC to VHF amplifier applications.

MAXIMUM RATINGS

Rating	Symbol	2N 3494 (TO-5)	2N 3495 (TO-5)	2N 3496 (TO-18)	2N 3497 (TO-18)	Unit
Collector-Base Voltage	V_{CB}	80	120	80	120	Vdc
Collector-Emitter Voltage	V_{CEO}	80	120	80	120	Vdc
Emitter-Base Voltage	V_{EB}	4.5		4.5		Vdc
Collector Current	I_C	100		100		mA
Total Device Dissipation @ T_C = 25°C Derate Above 25°C	P_D	3 17.2		1.8 10.3		Watts mW/°C
Total Device Dissipation @ T_A = 25°C Derate Above 25°C	P_D	600 3.43		400 2.28		mW mW/°C
Junction Temperature	T_J	-65 to +200				°C
Storage Temperature	T_{stg}	-65 to +200				°C

SWITCHING CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Characteristic	Symbol	Min	Max	Unit
Turn-On Time (V_{CC} = 30 V, I_C = 10 mA, I_{B1} = 1 mA, V_{BE} = 0)	t_{on}	—	300	ns
Turn-Off Time (V_{CC} = 30 V, I_C = 10 mA, I_{B1} = I_{B2} = 1 mA)	t_{off}	—	450	ns

2N3494 thru 2N3497 (continued)

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Characteristic		Symbol	Min	Max	Unit
Collector-Base Breakdown Voltage (I_C = 10 μAdc, I_E = 0)	2N3494, 2N3496	BV_{CBO}	80	—	Vdc
	2N3495, 2N3497		120	—	
Collector-Emitter Breakdown Voltage* (I_C = 10 mAdc, I_B = 0)	2N3494, 2N3496	BV_{CEO}*	80	—	Vdc
	2N3495, 2N3497		120	—	
Emitter-Base Breakdown Voltage (I_E = 10 μAdc, I_C = 0)	All Types	BV_{EBO}	4.5	—	Vdc
Collector Cutoff Current (V_{CB} = 50 Vdc, I_E = 0)	2N3494, 2N3496	I_{CBO}	—	100	nAdc
(V_{CB} = 90 Vdc, I_E = 0)	2N3495, 2N3497		—	100	
Emitter-Base Leakage Current (V_{CB} = 3 Vdc)	All Types	I_{EBO}	—	25	nAdc
DC Forward Current Transfer Ratio (I_C = 100 μAdc, V_{CE} = 10 Vdc)	All Types	h_{FE}	35	—	—
(I_C = 1 mAdc, V_{CE} = 10 Vdc)	All Types		40	—	
(I_C = 10 mAdc, V_{CE} = 10 Vdc)	All Types		40	—	
(I_C = 50 mAdc, V_{CE} = 10 Vdc)	All Types		40	—	
(I_C = 100 mAdc, V_{CE} = 10 Vdc)	2N3494, 2N3496		35	—	
Collector Saturation Voltage (I_C = 10 mAdc, I_B = 1 mAdc)	2N3494, 2N3496	$V_{CE(sat)}$	—	0.3	Vdc
	2N3495, 2N3497		—	0.35	
Base-Emitter Saturation Voltage (I_C = 10 mAdc, I_B = 1 mAdc)	All Types	$V_{BE(sat)}$	0.6	0.9	Vdc
Output Capacitance (V_{CB} = 10 Vdc, I_E = 0, f = 100 kHz)	2N3494, 2N3496	C_{ob}	—	7	pF
	2N3495, 2N3497		—	6	
Input Capacitance (V_{BE} = 2 Vdc, I_C = 0, f = 100 kHz)	All Types	C_{ib}	—	30	pF
Current-Gain — Bandwidth Product (I_C = 20 mAdc, V_{CE} = 10 Vdc, f = 100 MHz)	2N3494, 2N3496	f_T	200	—	MHz
	2N3495, 2N3497		150	—	
Small Signal Current Gain (V_{CE} = 10 V, I_C = 10 mA, f = 1 kHz)	All Types	h_{fe}	40	300	—
Input Impedance (V_{CE} = 10 V, I_C = 10 mA, f = 1 kHz)	All Types	h_{ie}	0.1	1.2	kohms
Voltage Feedback Ratio (V_{CE} = 10 V, I_C = 10 mA, f = 1 kHz)	All Types	h_{re}	—	2.0	X10^{-4}
Output Admittance (V_{CE} = 10 V, I_C = 10 mA, f = 1 kHz)	All Types	h_{oe}	—	300	μ mhos
Extrinsic Base Resistance (V_{CE} = 10 V, I_C = 20 mA, f = 300 MHz)	All Types	r_b	—	30	ohms

* Pulse width ≤ 300 μs, Duty Cycle = 2%