

Silicon Transistors

	Type No.	Case	Construction (see note 1)	Maximum Ratings at 25°C amb.					Characteristics							SPECIAL FEATURES	
									h _{FE}			f _T		V _{CE(SAT)}			
				V _{CB} V	V _{CE} V	V _{EB} V	I _C A	P _{tot} W	I _C mA	Min.	Max.	I _C mA	Min. Mc/s	I _C mA	I _B mA		Max. V
PNP Chopper	2S306	TO5	A	-6	-6	-6	0.01	0.05	-1	30*	—	-1	1.5	—	—	—	Offset Voltage 1 mV max. Typical V _{EC(SAT)} 50mV at I _E = 10mA Typical h _{FE(Inverse)} 5 at 1mA
	2S307	TO5	A	-15	-15	-15	0.01	0.05	-1	30*	—	-1	1.5	—	—	—	
	2S326	SO2	A	-6	-6	-6	0.01	0.05	-1	30*	—	-1	1.5	—	—	—	
	2S327	SO2	A	-15	-15	-15	0.01	0.05	-1	30*	—	-1	1.5	—	—	—	
NPN Chopper	2N2432	TO18	PE	30	30	15	0.10	0.30	1	50	—	1	20	10	0.5	0.15	Offset Voltage 500 μV max.
Silicon Sub Miniature Devices	TIS22	Chip-Pak	P	45	45	6	0.05	0.150	0.01	40	300	0.5	3	1.0	0.1	0.35	3dB Typical Noise Figure
	TIS23	Chip-Pak	P	45	45	6	0.05	0.150	0.01	100	120	0.5	3	1.0	0.1	0.35	
	TIS24	Chip-Pak	P	60	60	6	0.05	0.150	0.001	30	—	0.5	6	1.0	0.1	0.35	

Silicon Dual Transistors

	Type No.	Case	Construction (see note 1)	Maximum Ratings at 25°C amb.					Characteristics							SPECIAL FEATURES
				V _{CB} V	V _{CE} V	V _{EB} V	I _C A	P _{tot} W	h _{FE}		f _T		V _{BE1} -V _{BE2} mV	ΔV _{BE1} ΔTA μV/°C	N.F. dB	
									I _C A	Min.	I _C mA	Min. Mc/s				
NPN High Frequency Duals	2N2060	TO5-2	P	100	80	7	0.5	0.6	10	25	50	60	5	10	8	Average N.F. measured with noise bandwidth of 15.7 Kc/s V _{CE} = 10 V, I _C = 300 μA, R _G = 1 K Average N.F. measured with noise bandwidth of 10 c/s-15.7 Kc/s, V _{CB} = 5 V, I _C = 10 μA, R _G = 10 Kohms
	2N2223	TO5-2	P	100	80	7	0.5	0.6	10	15	50	50	15	25	-	
	2N2223A	TO5-2	P	100	80	7	0.5	0.6	10	15	50	50	5	25	-	
	2N2639	TO5-2	P	45	45	5	0.03	0.6	10	50	1	80	5	10	4	
	2N2640	TO5-2	P	45	45	5	0.03	0.6	10	50	1	80	10	20	4	
	2N2641	TO5-2	P	45	45	5	0.03	0.6	10	50	1	80	—	—	4	
	2N2642	TO5-2	P	45	45	5	0.03	0.6	10	100	1	80	5	10	4	
	2N2643	TO5-2	P	45	45	5	0.03	0.6	10	100	1	80	10	20	4	
	2N2644	TO5-2	P	45	45	5	0.03	0.6	10	100	1	80	—	—	4	
2N3680	TO5-2	P	60	50	5	0.03	0.6	10	150	0.5	60	3	5	3		
PNP High Frequency Duals	2N3347	TO5-2	PE	60	45	6	0.03	0.6	10	40	1	60	5	10	4	Average N.F. measured with noise bandwidth 15.7 Kc/s, V _{CE} = -5 V, I _C = -10 μA, R _G = 10 K
	2N3348	TO5-2	PE	60	45	6	0.03	0.6	10	40	1	60	10	20	4	
	2N3349	TO5-2	PE	60	45	6	0.03	0.6	10	40	1	60	20	40	4	
	2N3350	TO5-2	PE	60	45	6	0.03	0.6	10	100	1	60	5	10	4	
	2N3351	TO5-2	PE	60	45	6	0.03	0.6	10	100	1	60	10	40	4	
	2N3352	TO5-2	PE	60	45	6	0.03	0.6	10	100	1	60	20	20	4	

NOTE 1: The following symbols have been used throughout the Product Summary:

Under "Construction":
A — Alloyed
D — Diffused
E — Epitaxial
G — Grown
M — Mesa
P — Planar

Under h_{FE}:
* — h_{fe}

Under f_T:
φ — f_{hfb}
Δ — f_{hfe}
‡ — typical

Under Dissipation:
† — dissipation at T_{case} = 25°C