

4. Power Bipolar Transistors

4.1 Introduction

This power bipolar transistor line-up contains data on the range of Hitachi's discrete devices for applications in industrial, automotive, computer and consumer equipment.

4.2 Planar Process Technology

Planar technology is an optimisation of the mutliexpitaxial planar process. This new technology is used to produce high voltage, very fast switching transistors with lower switching and conduction losses, ideally for professional and industrial equipment such as power supplies, power conversion and motion controls.

4.3 Product Range

Table 17 : Power Switching Transistors Range

Package	Type Number	Absolute Maximum Ratings			Typical Electrical Characteristics		
		V _{CEO} (V)	V _{CBO} (V _{CE} S) (V)	I _C (A)	V _{CE(sat)} (V) max	t _f (μs) max	
TO-126 MOD	2SC2899	400	500	0.5	1	1	
	2SD781	60	150	2	0.6	0.6	
	2SD975				0.5		
TO-220AB	2SB566	-50	-70	-4	-1	0.5 typ	
	2SB566A	-60					
	2SC2612	400	500	3	1	1	
	2SC2613			5		0.5	
	2SC2613					0.8	
	2SC2816			8		1	
	2SC2898			3		0.5 typ	
	2SC2979	800	900	4	1.5	1	
	2SD476	50	70	4		-	
	2SD476A	60				-	
	2SD1136	80	200			1	-
	2SD1137	100	100	2	3	-	
	2SD1138	150	200	7	2	0.5	
	2SD1163	120	300	1			
	2SD1163A	150	350	0.5	5	-	
	2SD1527	1000	-				
TO-220FM	2SB1392	-60	-70	-4	-1	-	
	2SB1530	-150	-200	-2	-3		
	2SD2107	60	70	4	1		
	2SD2337	150	200	2	3		
	2SD2344		350	7	1.5		
DPAK	2SC4499	400	500	0.5	1	1	
	2SD2115	60	150	2	0.8	0.6	
TO-3P	2SC3322	800	900	5	1	1	
	2SC3336	400	500	15		0.5	
	2SC3365			10		1	
	2SC4742	-	1500	6	2	0.4	
	2SC4743	800			1	1	
	3SC4798	500	1200		2	0.5	
	2SC4799	80	300		0.8		
	2SD2293	-	1500	3	5	1	
	2SD2294	800				0.8	
	2SD2295	-		5		1	
	2SD2296	800					0.8
	2SD2297	-					0.8
	2SD2298	800		6			
TO-3P-L	2SC4789	800	1500	25	5	0.5	
	2SC4880	900	1700	12			
	2SC4897	800	1500	20			

Table 17 : Power Switching Transistors Range Cont'd

Package	Type Number	Absolute Maximum Ratings			Typical Electrical Characteristics		
		V _{CEO} (V)	V _{CB0} (V _{CES}) (V)	I _C (A)	V _{CE(sat)} (V) max	t _r (μs) max	
TO-3P-FM	2SC4589	800	1500	10	5	0.5	
	2SC4692			12	5		
	2SC4744			-	2		
	2SC4745	800		6	5	0.3	
	2SC4746			8		0.5	
	2SC4747			10		0.3	
	2SC4796	900	1700	6		0.5	
	2SC4797			8			
	2SC4877	-	1500	10			0.8
	2SC4878	900	1700	3			
	2SC4879	-	1500	5		1	
	2SD2299	800		6		0.8	
	2SD2300			5			
	2SD2301			6			
	2SD2311	5					
TO-3	2SC2818	400	500	10	1	0.5	
	2SC2818 (H)						
	2SC2819			15			
	2SC2819 (H)			20	1		
	2SC2820	80	350	6	2	0.5	
	2SC4697	800	1500	8			
	2SC4739			10	1		
	2SC4740			5			
	2SC4741			6	2	0.5	
	2SC4800	500	1200	5		1	
	2SC4801	800	1700	6		0.6	
	2SC4802	-	1500	5	5	0.5	
	2SC4803	400	1000	10		1	
	2SD1094	-	1500	3		0.8	
	2SD2287	800		5		1	
	2SD2288	-		6		0.8	
	2SD2289	800					
	2SD2290	-					
	2SD2291	800					
	2SD2292	-					