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 optimistion 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_{CES}) (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		
	2SC2613					0.5
	2SC2816			8		0.8
	2SC2898					1
	2SC2979	800	900	3		0.5 typ
	2SD476	50	70	4		
	2SD476A	60				
	2SD1136	80	200		1.5	1
	2SD1137	100	100		1	-
	2SD1138	150	200	2	3	-
	2SD1163	120	300	7	2	0.5
	2SD1163A	150	350		1	
	2SD1527	1000	-	0.5	5	-
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				
	3SC4798	500	1200		1	1
	2SC4799	80	300		2	0.5
	2SD2293	-	1500	3	5	0.8
	2SD2294	800				1
	2SD2295	-		5		0.8
	2SD2296	800				
	2SD2297	-		6		
	2SD2298	800				
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_{CBO} (V)	V_{CBO} (V_{CES}) (V)	I_C (A)	$V_{CE(sat)}$ (V) max	t_f (μs) max
TO-3P-FM	2SC4589	800	1500	10	5	0.5
	2SC4692			12	5	
	2SC4744	-		6	2	
	2SC4745	800			5	0.3
	2SC4746			8		0.5
	2SC4747			10		0.3
	2SC4796	900	1700	6		0.5
	2SC4797			8		
	2SC4877	-	1500			
	2SC4878			10		
	2SC4879	900	1700			
	2SD2299	-	1500	3		0.8
	2SD2300			5		1
	2SD2301	800		6		0.8
	2SD2311			5		
TO-3	2SC2818	400	500	10	1	0.5
	2SC2818 (H)					
	2SC2819			15		
	2SC2819 (H)					
	2SC2820			20		1
	2SC4697	80	350	6	2	0.5
	2SC4739	800	1500		5	
	2SC4740			8		
	2SC4741			10		
	2SC4800			5	1	1
	2SC4801	500	1200	6		0.6
	2SC4802	800	1700	5	2	0.5
	2SC4803	-	1500	6		
	2SD1094	400	1000	10	1	1
	2SD2287	-	1500	3	5	0.8
	2SD2288	800				1
	2SD2289	-		5		0.8
	2SD2290	800				
	2SD2291	-		6		
	2SD2292	800				