

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 multi-epitaxial 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 _{CE0} (V _{CE0}) (V)	I _C (A)	V _{CE(sat)} (V) max	f _T (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			8		0.8			
	2SC2816			3		1			
	2SC2898			4		0.5 typ			
	2SC2979			3		1			
	2SD476			50		70	4	1.5	-
	2SD476A			60					
	2SD1136			80		200			
	2SD1137			100		100			
	2SD1138	150	200						
	TO-220FM	2SD1163	120	300	7	2	0.5		
		2SD1163A	150	350	7	1	-		
2SD1527		1000	-	0.5	5	-			
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	1200		1	1			
	3SC4798	500	300		2	0.5			
	2SC4799	80	300		2	0.8			
	2SD2293	-	1500	3	5	1			
	2SD2294	800							
	2SD2295	-		5		0.8			
	2SD2296	800		6		5	0.8		
2SD2297	-								
2SD2298	800								
TO-3P-L	2SC4789	800	1500	25	5	0.5			
	2SC4830	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 _{CE0} (V _{CES}) (V)	I _C (A)	V _{CE(sat)} (V) max	f _T (μs) max	
TO-3P-FM	2SC4589	800	1500	10	5	0.5	
	2SC4692			12			
	2SC4744			-			
	2SC4745	800	1500	6	2	0.3	
	2SC4746			8			
	2SC4747			10			
	2SC4796	900	1700	6	5	0.5	
	2SC4797			8			
	2SC4777			10			
	2SC4778	-	1500	3	5	0.8	
	2SC4779	900	1700				
	2SD2299	-	1500				
	2SD2300	-	1500	5	1	0.8	
	2SD2301	800		6			
2SD2311	-	5					
TO-3	2SC2818	400	500	10	1	0.5	
	2SC2818 (H)			15			
	2SC2819						20
	2SC2819 (H)						
	2SC2820	80	350	6	2	0.5	
	2SC4697			8			
	2SC4739			10			
	2SC4740	800	1500	5	1	0.6	
	2SC4741			6			
	2SC4800			5			
	2SC4801	500	1200	6	2	0.5	
	2SC4802	800	1700	5			
	2SC4803	-	2500	6			
	2SD1094	400	1000	10	1	0.8	
	2SD2287	800	1500	3			
	2SD2288			5			
	2SD2289			6			
2SD2290	-	1500	5	5	1		
2SD2291	800		6				
2SD2292	800		6				