NPN Silicon Transistors

NPN Silicon Epitaxial Planar Transistors (I_C = 1 A) in TO-39 (≈ TO-5) metal case

Type	Maximum ratings							Characteristics at T_{amb} = 25 °C		
					@ T_{amb} = 25 °C	@ T_{case} = 25 °C (T_{case} = 100 °C)				
	V_{CBO} V	V_{CEO} V	V_{EBO} V	I_C A	P_{tot} W	P_{tot} W	T_j °C	Θ_{case} (Θ_{amb}) °C/W	I_{CBO} nA (I_{CEO} μA)	@ V_{CB} V (V_{CE} V)
BSY 81	40	18	5	1	0,9	5	200	< 35 (< 194)	< 100	30
BSY 82	40	18	5	1	0,9	5	200	< 35 (< 194)	< 100	30
BSY 83 ≈ BSY 40, 2 N 2297	80	35	7	1	0,9	5	200	< 35 (< 194)	< 10	60
BSY 84	80	35	7	1	0,9	5	200	< 35 (< 194)	< 10	60
BSY 85 ≈ 2 N 2193 A	120	64	7	1	0,9	5	200	< 35 (< 194)	< 10	90
BSY 86	120	64	7	1	0,9	5	200	< 35 (< 194)	< 10	90
BFY 50	80	35	6	1	0,8	(2,8)	200	< 35 (< 220)	< 50	60
BFY 51	60	30	6	1	0,8	(2,8)	200	< 35 (< 220)	< 50	40
BFY 52	40	20	6	1	0,8	(2,8)	200	< 35 (< 220)	< 50	30

Type	Characteristics at T_{amb} = 25 °C								
	@ V_{CE} = 10 V I_C = 0,1 mA	I_C = 10 mA (V_{CE} = 6 V)	I_C = 0,15 A (V_{CE} = 6 V)	I_C = 0,5 A (V_{CE} = 2 V)	I_C = 1 A (V_{CE} = 1 V)	@ I_C = 1 A I_B = 0,1 A			@ V_{CBO} = 10 V (12 V)
	h_{21E}	h_{21E}	h_{21E}	h_{21E}	h_{21E}	$V_{CE\,sat}$ V	f_T MHz	@ V_{CE}/I_C V/mA	C_{22b} pF
BSY 81	> 20	> 35	40 ... 120	> 30	> 15	< 1,2	100	10/50	< 15
BSY 82	> 35	> 75	100 ... 300	> 40	> 20	< 1,2	120	10/50	< 15
BSY 83	> 20	> 35	40 ... 120	> 30	> 15	< 1	100	10/50	< 15
BSY 84	> 35	> 75	100 ... 300	> 40	> 20	< 1	120	10/50	< 15
BSY 85	> 20	> 35	40 ... 120	> 30	> 15	< 1	110	10/50	< 15
BSY 86	> 35	> 75	100 ... 300	> 40	> 20	< 1	130	10/50	< 15
BFY 50	—	(> 20)	(> 30)	—	(> 15)	< 1	100	6/50	(7)
BFY 51	—	(> 30)	(> 40)	—	(> 15)	< 1,6	110	6/50	(7)
BFY 52	—	(> 30)	(> 60)	—	(> 15)	< 1,6	120	6/50	(7)

NPN Silicon Epitaxial Planar Transistors in TO-39 (≈ TO-5) in metal case, for video output stages

Type	Maximum ratings						Characteristics at T_{amb} = 25 °C							
		@ R_{BE} = 1 kΩ			@ T_{case} = 25 °C (100 °C)		@ V_{CE} = 10 V I_C = 30 mA	@ I_C = 30 mA I_B = 6 mA						
	V_{CBO} V	V_{CER} V (V_{CEO} V)	V_{EBO} V	I_C mA	P_{tot} W	T_j °C	h_{21E}	$V_{CE\,sat}$ V	I_{CBO} nA	@ V_{CB} V	f_T MHz	@ V_{CE}/I_C V/mA	C_{22b} pF	@ V_{CBO} V
BF 117	.140	(140)	5	100	(1,27)	175	> 25	< 1	< 10	100	80	10/20	2	20
BF 118	250	250	5	100	5	175	> 25	< 1	< 50	200	110	10/30	3,5	30
BF 119	160	160	5	100	5	175	> 25	< 1	< 50	100	110	10/30	3,5	30

NPN Silicon Epitaxial Planar Transistor in TO-18 metal case. Driver for numerical indicator tubes

Type	Maximum ratings						Characteristics at T_{amb} = 25 °C			
		@ V_{EB} = 1 V			@ T_{amb} = 25 °C		@ V_{CE} = 1 V I_C = 1 mA	@ I_C = 2 mA I_B = 0,2 mA	@ V_{CB} = 90 V	
	V_{CBO} V	V_{CEV} V	V_{EBO} V	I_C mA	P_{tot} mW	T_j °C	h_{21E}	$V_{CE\,sat}$ V	I_{CBO} nA	Θ_{amb} °C/mW
BSY 79	120	120	5	30	300	175	> 30	0,3 (< 0,5)	< 50	< 0,5

Red = New Type