

2SA1779

Silicon PNP Epitaxial

Application

High speed switching

Table 1 Ordering Information

Type No.	h_{FE}
2SA1779A	35 to 70
2SA1779B	60 to 120
2SA1779C	100 to 200

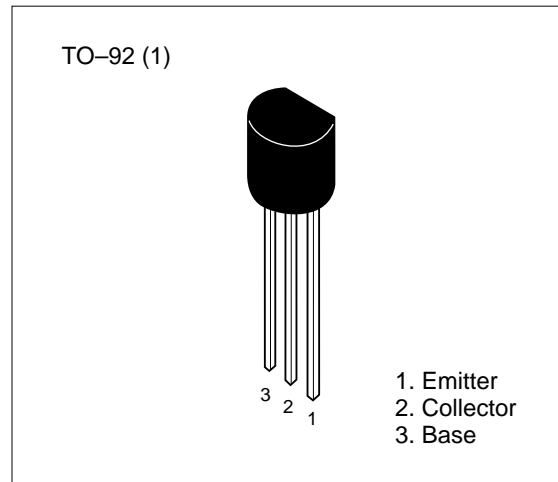


Table 2 Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-50	V
Collector to emitter voltage	V_{CEO}	-35	V
Emitter to base voltage	V_{EBO}	-5	V
Collector current	I_C	-100	mA
Collector power dissipation	P_C	0.4	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

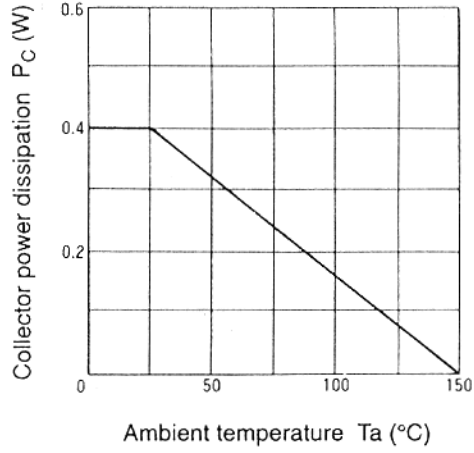
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Table 3 Electrical Characteristics (Ta = 25°C)

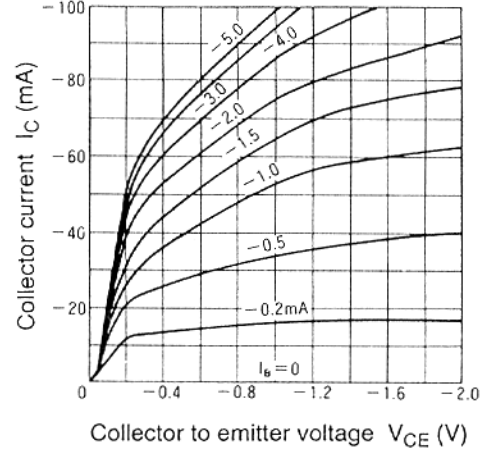
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-50	—	—	V	$I_C = -10 \mu A, I_E = 0$
Collector to Emitter breakdown voltage	$V_{(BR)CEO}$	-35	—	—	V	$I_C = -10 mA, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-5	—	—	V	$I_E = -10 \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	-1.0	μA	$V_{CB} = -20 V, I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	-1.0	μA	$V_{EB} = -4 V, I_E = 0$
DC current transfer ratio						
2SA1779A	h_{FE}	35	—	70		$V_{CE} = -1 V, I_C = -10 mA$
2SA1779B		60	—	120		
2SA1779C		100	—	200		
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	-0.25	V	$I_C = -20 mA, I_B = -2 mA$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	-0.8	V	$I_C = -10 mA, I_B = -1 mA$
Collector output capacitance	C_{ob}	—	—	8	pF	$V_{CB} = -10 V$ $I_E = 0$ $f = 1 MHz$
High frequency AC current transfer ratio	h_{fe}	2	—	—		$V_{CE} = -10 V, I_C = -20 mA$ $f = 100 MHz$
Storage time	t_{stg}	—	—	300	ns	$V_{CC} = -6.3 V$ $I_C = I_{B1} = -I_{B2} = -20 mA$

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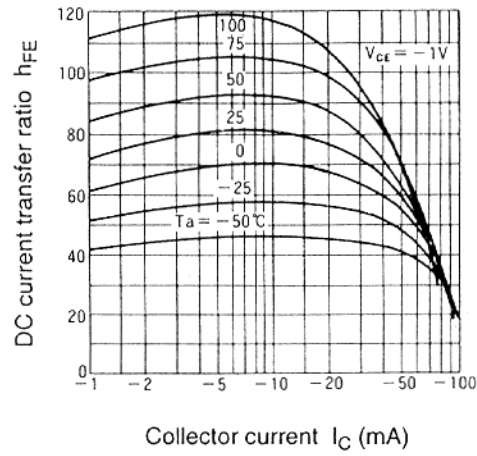
Maximum collector power dissipation curve



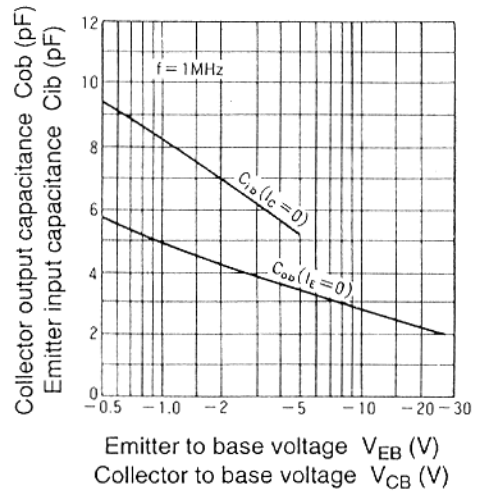
Typical output characteristics



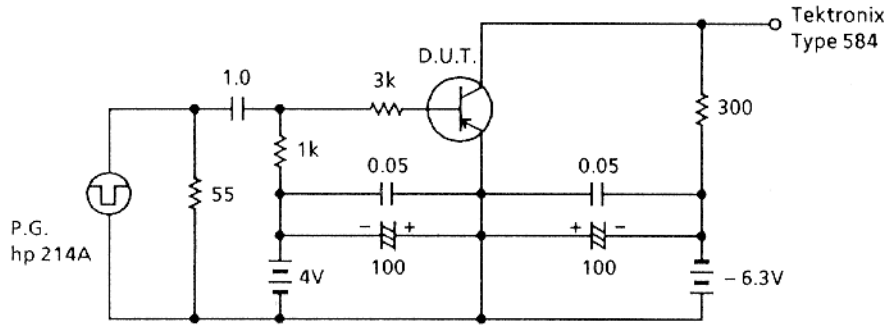
DC current transfer ratio vs. collector current



Input and output capacitance vs. voltage

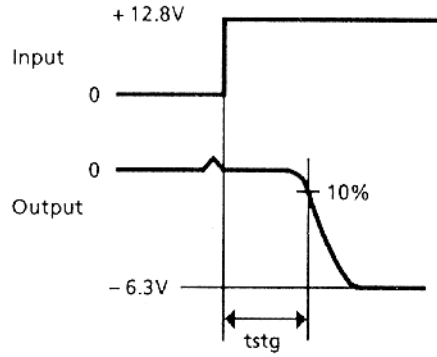


Switching time test circuit



Unit
R : Ω
C : μF

Response waveform



Transient thermal resistance

