



SOT-523 Plastic-Encapsulated Transistors

2SA1774 TRANSISTOR (PNP)

FEATURES

Power dissipation

$$P_{CM} : 0.15 \text{ W (Tamb=25°C)}$$

Collector current

$$I_{CM} : -0.15 \text{ A}$$

Collector-base voltage

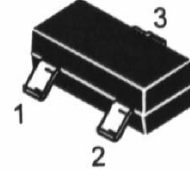
$$V_{(BR)CBO} : -60 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55°C \text{ to } +150°C$$

SOT-523

1. BASE
2. EMITTER
3. COLLECTOR



ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -50\mu A, I_E = 0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -50\mu A, I_C = 0$	-7			V
Collector cut-off current	I_{CBO}	$V_{CB} = -60V, I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -6V, I_C = 0$			-0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -6V, I_C = -1mA$	120		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50mA, I_B = -5mA$			-0.5	V
Transition frequency	f_T	$V_{CE} = -12V, I_C = -2mA, f = 30MHz$		140		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -12V, I_E = 0, f = 1MHz$			5	pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	Q	R	S
Range	120-270	180-390	270-560
Marking	FQ	FR	FS

Typical Characteristics

2SA1774

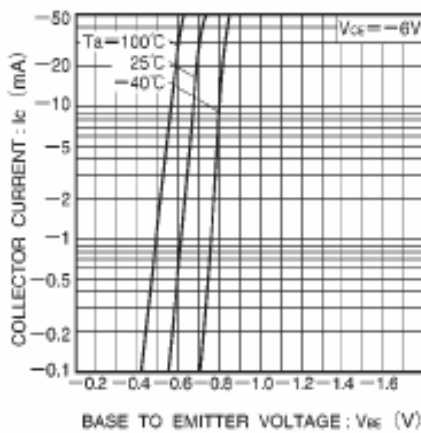


Fig.1 Grounded emitter propagation characteristics

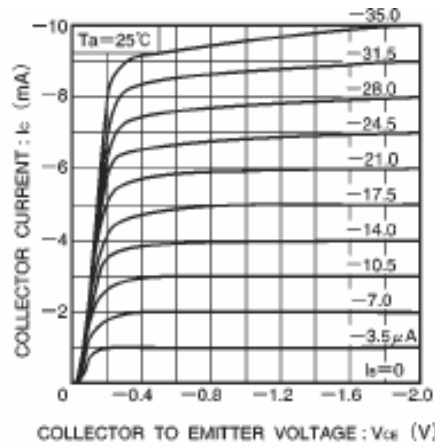


Fig.2 Grounded emitter output characteristics (I)

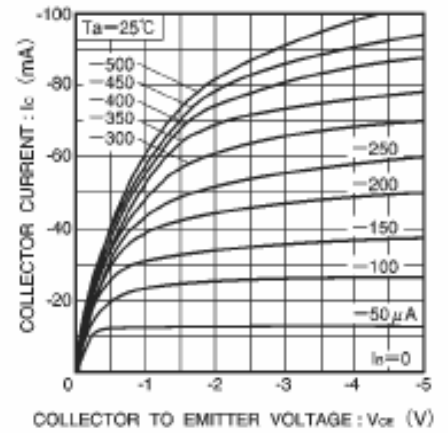


Fig.3 Grounded emitter output characteristics (II)

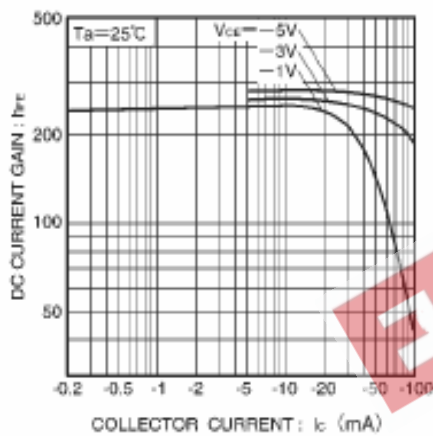


Fig.4 DC current gain vs. collector current (I)

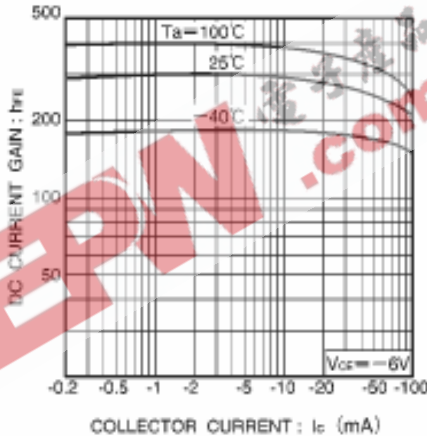


Fig.5 DC current gain vs. collector current (II)

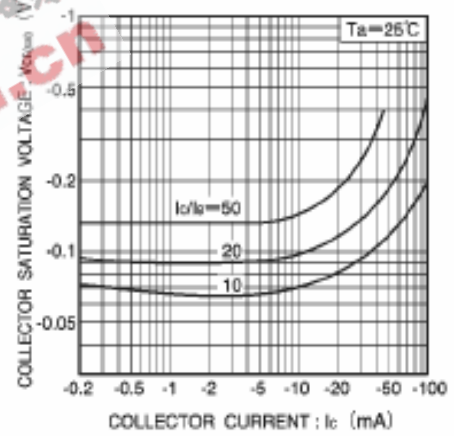


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

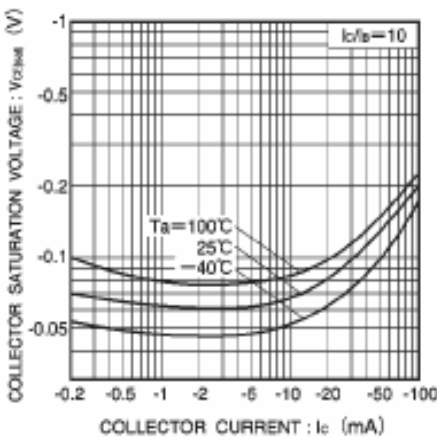


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

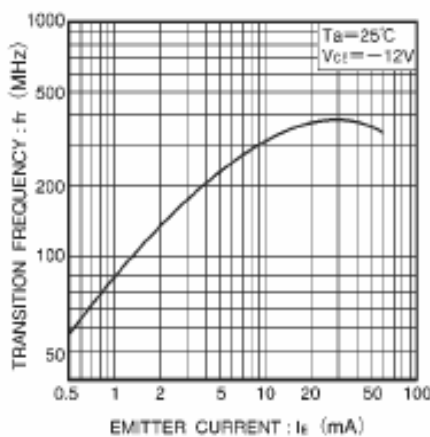


Fig.8 Gain bandwidth product vs. emitter current

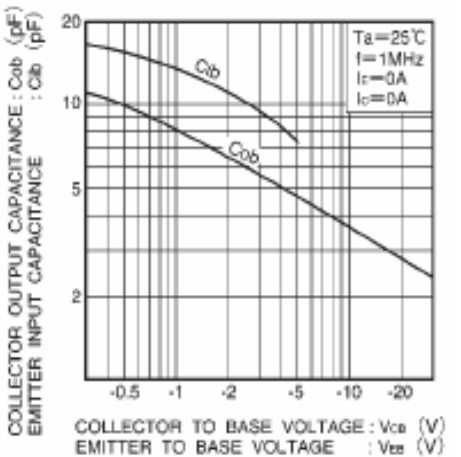


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage