

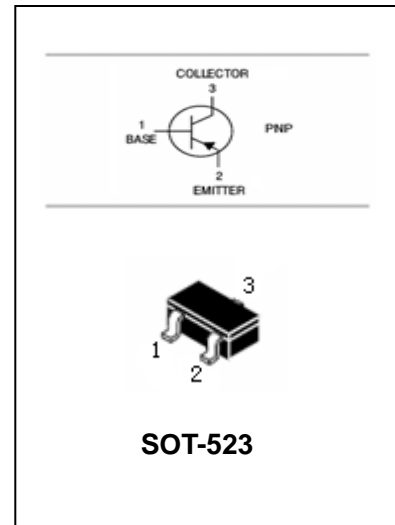
PNP General Purpose Transistor

2SA1774

FEATURES

- Excellent h_{FE} linearity
- Complementary NPN type available (2SC4617)
- MSL 1

HF



APPLICATIONS

- Epitaxial planar type
- PNP silicon transistor

ORDERING INFORMATION

Type No.	Marking	Package Code
2SA1774	FQ/FR/FS	SOT-523

MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Limits	Unit
V_{CBO}	collector-base voltage	-60	V
V_{CEO}	collector-emitter voltage	-50	V
V_{EBO}	emitter-base voltage	-6	V
I_C	collector current	-150	mA
P_d	Power dissipation	150	mW
$R_{\theta JA}$	Thermal resistance, junction to Ambient	833	$^\circ\text{C}/\text{W}$
T_{STG}	storage temperature range	-55 to +150	$^\circ\text{C}$
T_J	junction temperature	150	$^\circ\text{C}$

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN.	Typ.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakown voltage	$I_C=-50\mu A, I_E=0$	-60			
$V_{(BR)CEO}$	Collector- emitter breakown voltage	$I_C=-1\mu A, I_B=0$	-50			
$V_{(BR)BEO}$	Emitter-base breakown voltage	$I_E=-50\mu A, I_C=0$	-6			
I_{CBO}	Collector cut-off current	$I_E=0, V_{CB}=-60V$			-0.1	μA
I_{EBO}	Emitter cut-off current	$I_C=0, V_{EB}=-6V$			-0.1	μA
h_{FE}	DC current gain	$V_{CE}=-6V, I_C=-1mA$	120		560	
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C=-50mA, I_B=-5mA$			-0.5	V
C_{obo}	Output capacitance	$I_E=0, V_{CB}=-12V, f=1MHz$		4.0	5.0	pF
f_T	transition frequency	$I_C=-2mA, V_{CE}=-12V, f=30MHz$		140		MHz

CLASSIFICATION OF H_{FE}

RANK	Q	R	S
RANGE	120-270	180-390	270-560
MARKING	FQ	FR	FS

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TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

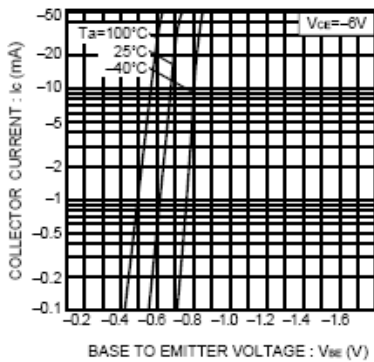


Fig.1 Grounded emitter propagation characteristics

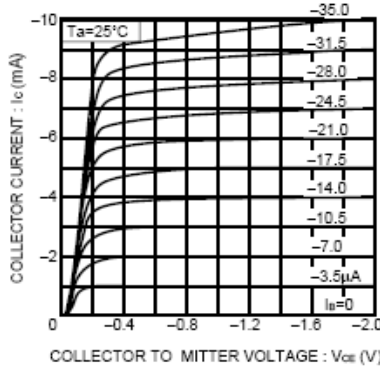


Fig.2 Grounded emitter output characteristics (I)

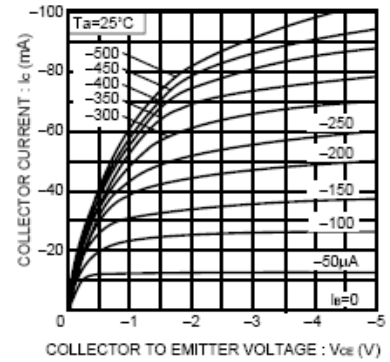


Fig.3 Grounded emitter output characteristics (II)

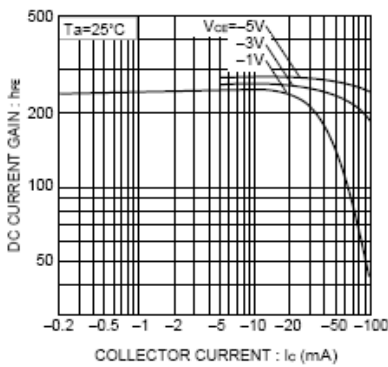


Fig.4 DC current gain vs. collector current (I)

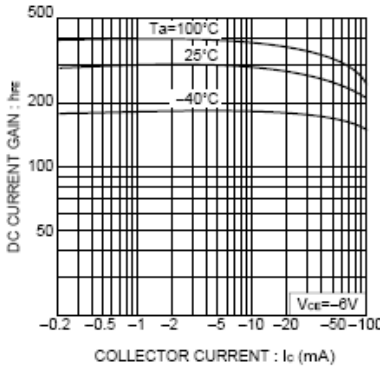


Fig.5 DC current gain vs. collector current (II)

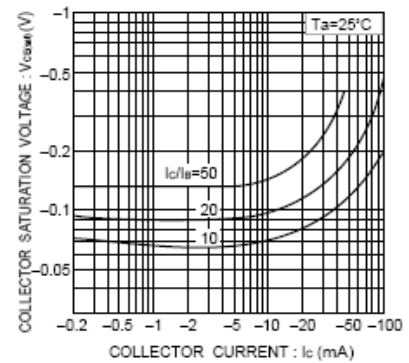


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

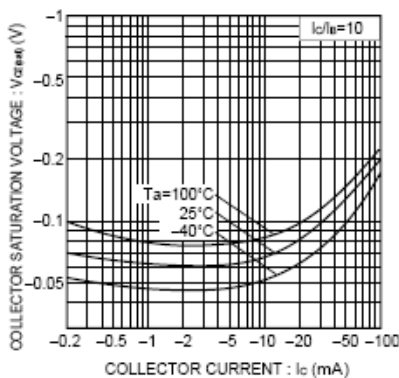


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

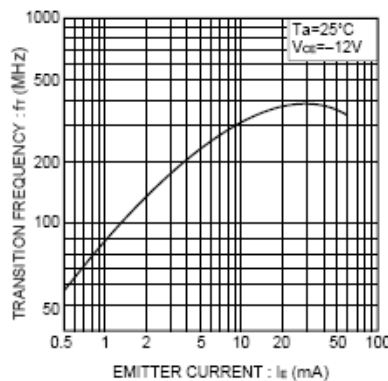


Fig.8 Gain bandwidth product vs. emitter current

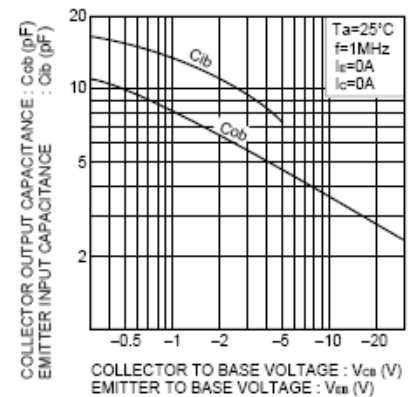


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

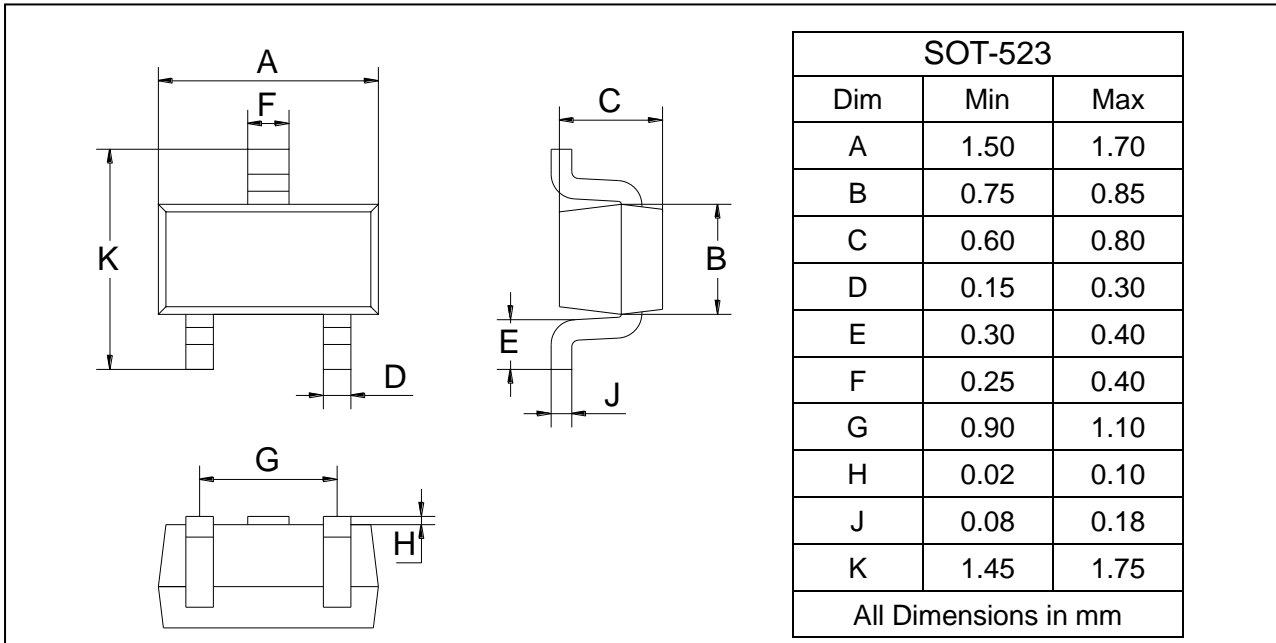
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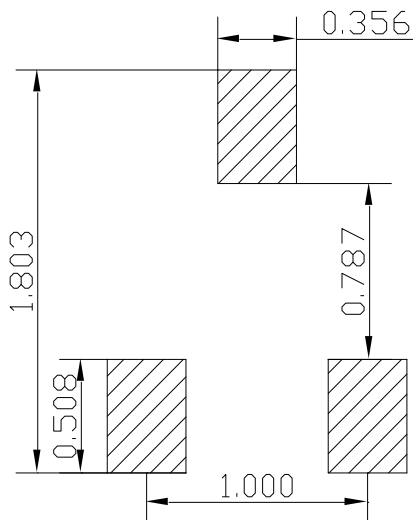
PACKAGE OUTLINE

Plastic surface mounted package

SOT-523



SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

Device	Package	Shipping
2SA1774	SOT-523	3000 pcs / Tape & Reel