

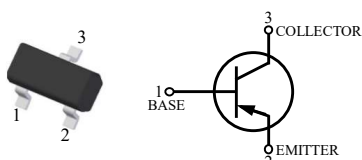


2SA1774 SERIES

PNP TRANSISTORS

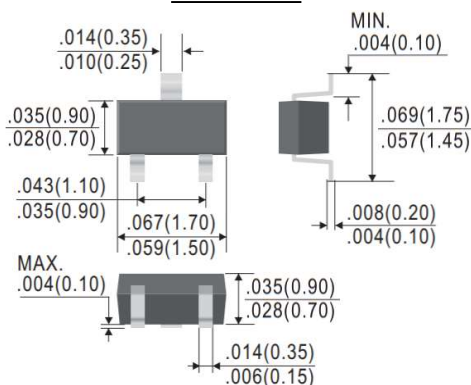
FEATURES

· Suffix "H" indicates Halogen-free parts, ex.2SA1774QTH



B	Base
C	Collector
E	Emitter

SOT-523



Dimensions in inch and (millimeter)

Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	-60	V
Collector Emitter Voltage	V_{CEO}	-50	V
Emitter Base Voltage	V_{EBO}	-6	V
Collector Current	I_C	-150	mA
Power Dissipation	P_{tot}	150	mW
Thermal Resistance from Junction to Ambient (Note 1)	$R_{\theta JA}$	833	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Note :

1. Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain	Q	h_{FE}	120	-	270	-
	R		180	-	390	-
	S		270	-	560	-
Collector Base Cutoff Current	$V_{CB} = -60\text{V}$	I_{CBO}	-	-	100	nA
Emitter Base Cutoff Current	$V_{EB} = -6\text{V}$	I_{EBO}	-	-	100	nA
Collector Base Breakdown Voltage	$I_C = -50\mu\text{A}$	$V_{(BR)CBO}$	-60	-	-	V
Collector Emitter Breakdown Voltage	$I_C = -1\text{mA}$	$V_{(BR)CEO}$	-50	-	-	V
Emitter Base Breakdown Voltage	$I_E = -50\mu\text{A}$	$V_{(BR)EBO}$	-6	-	-	V
Collector Emitter Saturation Voltage	$I_C = -50\text{mA}$, $I_B = -5\text{mA}$	$V_{CE(sat)}$	-	-	-0.5	V
Transition Frequency	$V_{CE} = -12\text{V}$, $I_E = 2\text{mA}$, $f = 30\text{MHz}$	f_T	-	140	-	MHz
Collector Output Capacitance	$V_{CB} = -12\text{V}$, $f = 1\text{MHz}$	C_{ob}	-	-	5	pF



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RATINGS AND CHARACTERISTIC CURVES

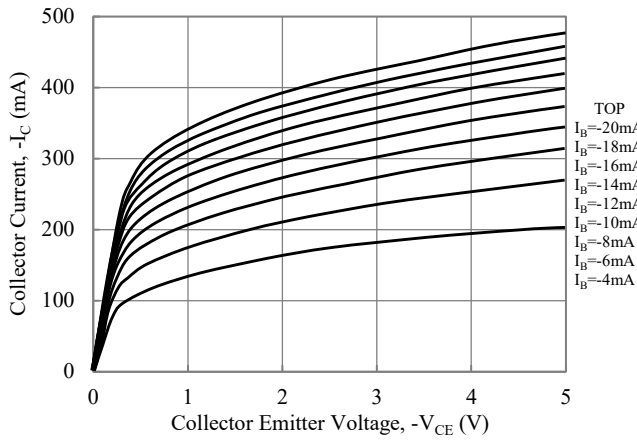


Fig. 1-Output Characteristics Curve

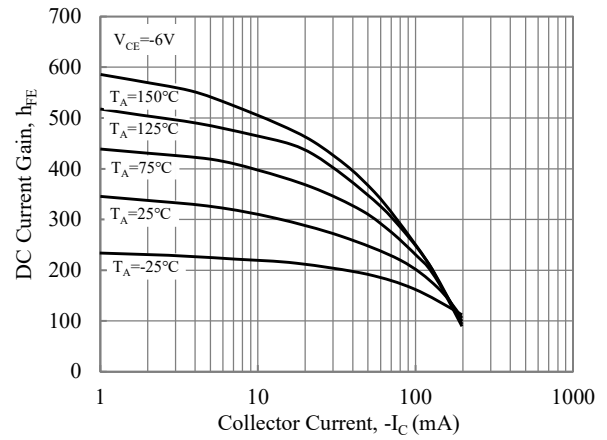


Fig. 2-DC Current Gain vs. Collector Current

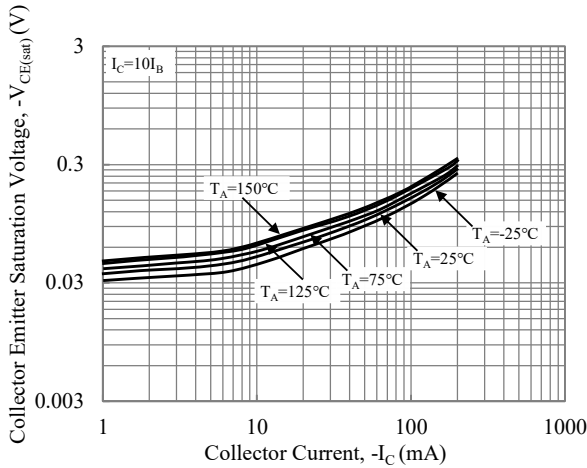


Fig. 3-Collector Emitter Saturation Voltage vs. Collector Current

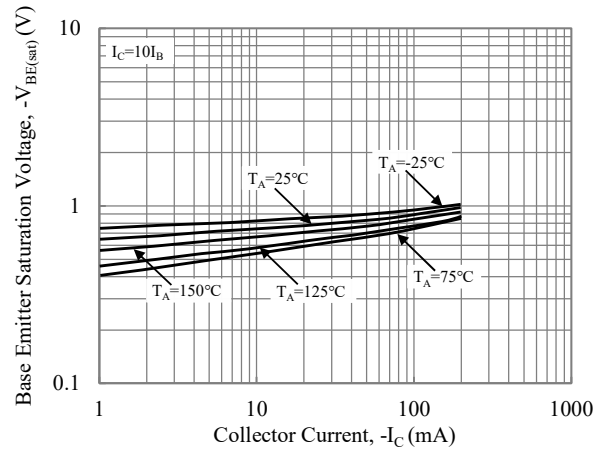


Fig. 4-Base Emitter Saturation Voltage vs. Collector Current

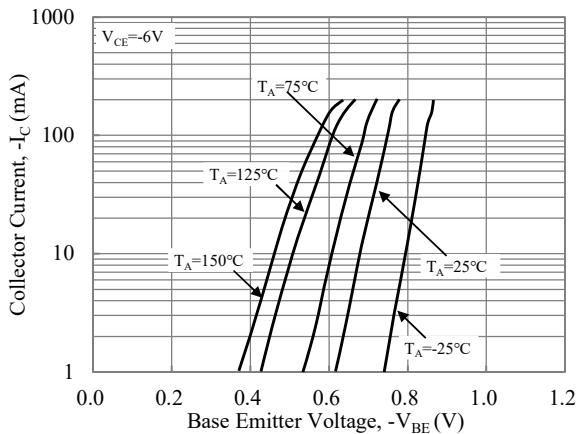


Fig. 5-Base Emitter Voltage vs. Collector Current

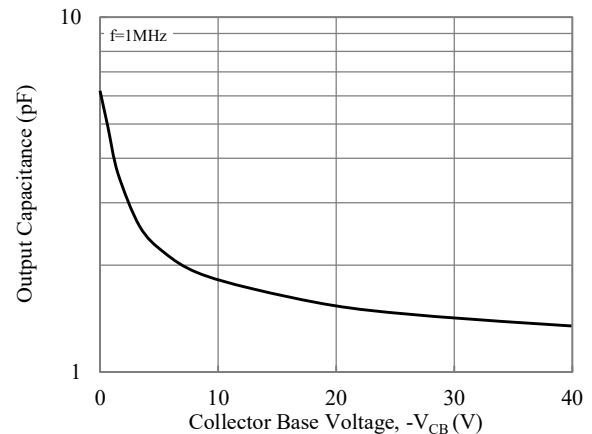


Fig. 6-Output Capacitance



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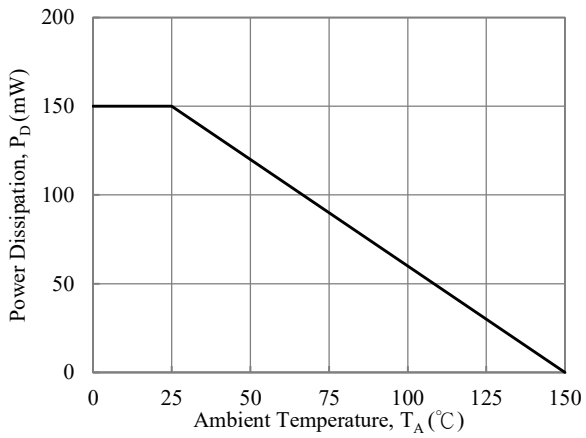


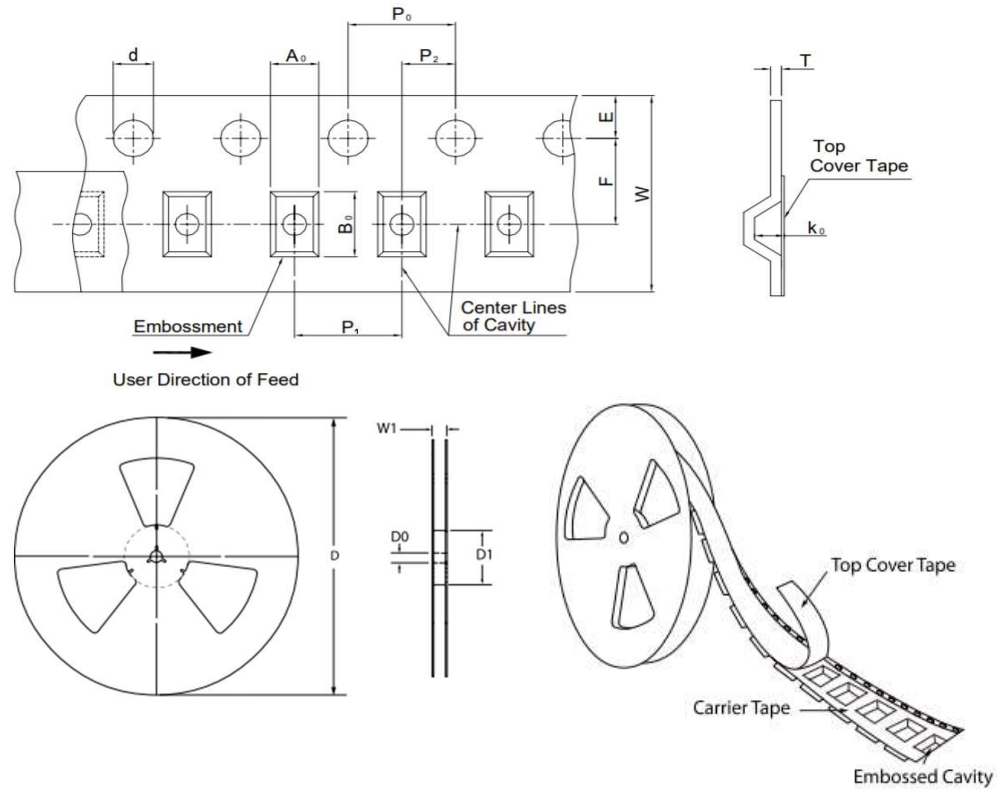
Fig. 7-Power Derating Curve



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TAPE & REEL SPECIFICATION



Item	Symbol	SOT-523
Carrier width	A_0	See Note a
Carrier length	B_0	
Carrier depth	K_0	
Sprocket hole	d	1.60 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D_0	13.00 ± 0.50
Reel inner diameter	D_1	MIN. 50.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P_0	4.00 ± 0.10
Punch hole pitch	P_1	4.00 ± 0.10
Embossment center	P_2	2.00 ± 0.10
Overall tape thickness	T	0.20 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W_1	MAX. 14.50

Note a: A_0 B_0 K_0 are determined by component size. The clearance between the components and the cavity must be within 0.05mm to 0.5mm max.

ORDER INFORMATION

Package	Reel Size	Quantity
SOT-523	7"	4,000

MARKING CODE

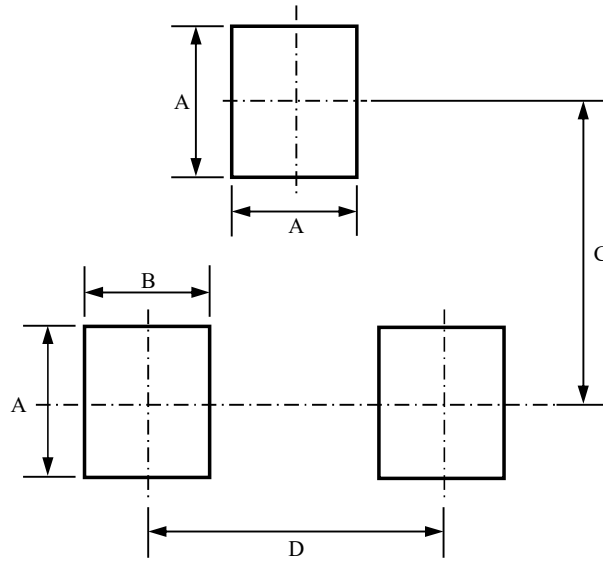
Part Number	Marking Code
2SA1774QTH	3E
2SA1774RTH	3F
2SA1774STH	3G



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SUGGESTED SOLDER PAD LAYOUT



Unit :mm

PACKAGE	A	B	C	D
SOT-523	0.70	0.60	1.30	1.00