

2SA1774

2SA1774Q / 2SA1774R / 2SA1774S SOT-523 Silicon General Purpose Transistor (PNP)

General description

SOT-523 Silicon General Purpose Transistor (PNP)

FEATURES

- Low Cob = 3.5pF (Typical)
- Low Vce(sat) < 0.5V
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish
- Weight: approx. 0.002g

Green Product



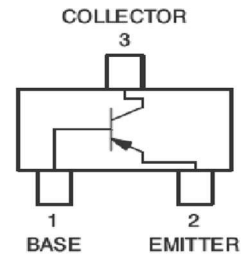
SOT-523

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

Symbol	Parameter	Value	Units
P_c	Collector Power Dissipation	150	mW
T_{STG}	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	+150	$^\circ\text{C}$
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_c	Collector Current - Continuous	-100	mA

These ratings are limiting values above which the serviceability of the diode may be impaired.

Electrical Symbol:



Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified).

Symbol	Parameter	Test Condition	Limits			Unit	
			Min	Typ	Max		
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_c = -50\mu\text{A}, I_E = 0\text{A}$	-50			Volts	
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_c = -1\text{mA}, I_B = 0\text{A}$	-50			Volts	
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -50\mu\text{A}, I_C = 0\text{A}$	-5			Volts	
I_{CBO}	Collector Cut-off Current	$V_{CB} = -50\text{V}, I_E = 0\text{A}$			-0.1	μA	
I_{EBO}	Emitter Cut-off Current	$V_{EB} = -5\text{V}, I_C = 0\text{A}$			-0.1	μA	
h_{FE}	DC Current Gain	2SA1774Q	$V_{CE} = -6\text{V}, I_C = -1\text{mA}$	120		270	---
		2SA1774R	$V_{CE} = -6\text{V}, I_C = -1\text{mA}$	180		390	---
		2SA1774S	$V_{CE} = -6\text{V}, I_C = -1\text{mA}$	270		560	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_c = -50\text{mA}, I_B = -5\text{mA}$			-0.5	Volts	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_c = -50\text{mA}, I_B = -5\text{mA}$			-1.2	Volts	

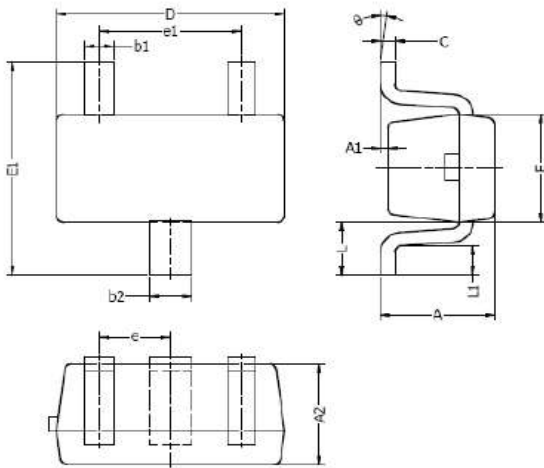
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Symbol	Parameter	Test Condition	Limits			Unit
			Min	Typ	Max	
f_T	Transition Frequency	$V_{CE} = -5V, I_C = -10mA$ $f = 30MHz$		230		MHz
C_{OB}	Collector Output Capacitance	$V_{CB} = -12V, I_E = 0A,$ $f = 1MHz$		3.5		pF

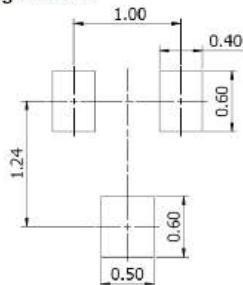
Classification of h_{FE} & Marking Code:

Rank	2SA1774Q	2SA1774R	2SA1774S
h_{FE} Range	120 - 270	180 - 390	270 - 560
Classification of h_{FE}			
Marking	FQ	FR	FS

SOT-523 PACKAGE OUTLINE



Typical Soldering Pattern:



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.70	0.90	0.028	0.035
A1	0.00	0.10	0.000	0.004
A2	0.70	0.80	0.028	0.031
b1	0.15	0.25	0.006	0.010
b2	0.25	0.35	0.010	0.014
c	0.10	0.20	0.004	0.008
D	1.50	1.70	0.059	0.067
E	0.70	0.90	0.028	0.035
E1	1.45	1.75	0.057	0.069
e	0.50 TYP.		0.020 TYP.	
e1	0.90	1.10	0.035	0.043
L	0.40 REF.		0.016 REF.	
L1	0.10	0.30	0.004	0.012
θ	0°	8°	0°	8°

NOTES:

- Above package outline conforms to JEITA EAIJ ED-7500A SC-75A.
- Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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