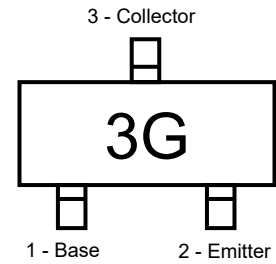


Feature

This device is Pb-Free, Halogen Free/BFR Free and RoHS compliant.

- Package: SOT-523
- Emitter -Base Breakdown Voltage 5V
- High DC current gain typical 380
- Low Saturation Voltage 200mV
- 100mA continuous collector current
- PNP switch transistor



Marking (Top View)

Mechanical Characteristics

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260°C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 um
- Pin flatness : ≤3mil

Electrical characteristics per line@25°C(unless otherwise specified)

Parameter	Symbol	Value	Units
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-40	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-50	V
Emitter -Base Breakdown Voltage	$V_{(BR)EBO}$	-5	V
Collector Current	I_C	-100	mA
Peak Collector Current	I_{CM}	-200	mA
Peak Base Current	I_{BM}	-100	mA
Total Dissipation @25°C	P_{tot}	150	mW
Storage Temperature	T_{stg}	-65~150	°C
Max. Operating Junction Temperature	T_j	150	°C
Thermal Characteristics			
Thermal Resistance From Junction to ambient(Note 1)	$R_{th j-a}$	833	K/W

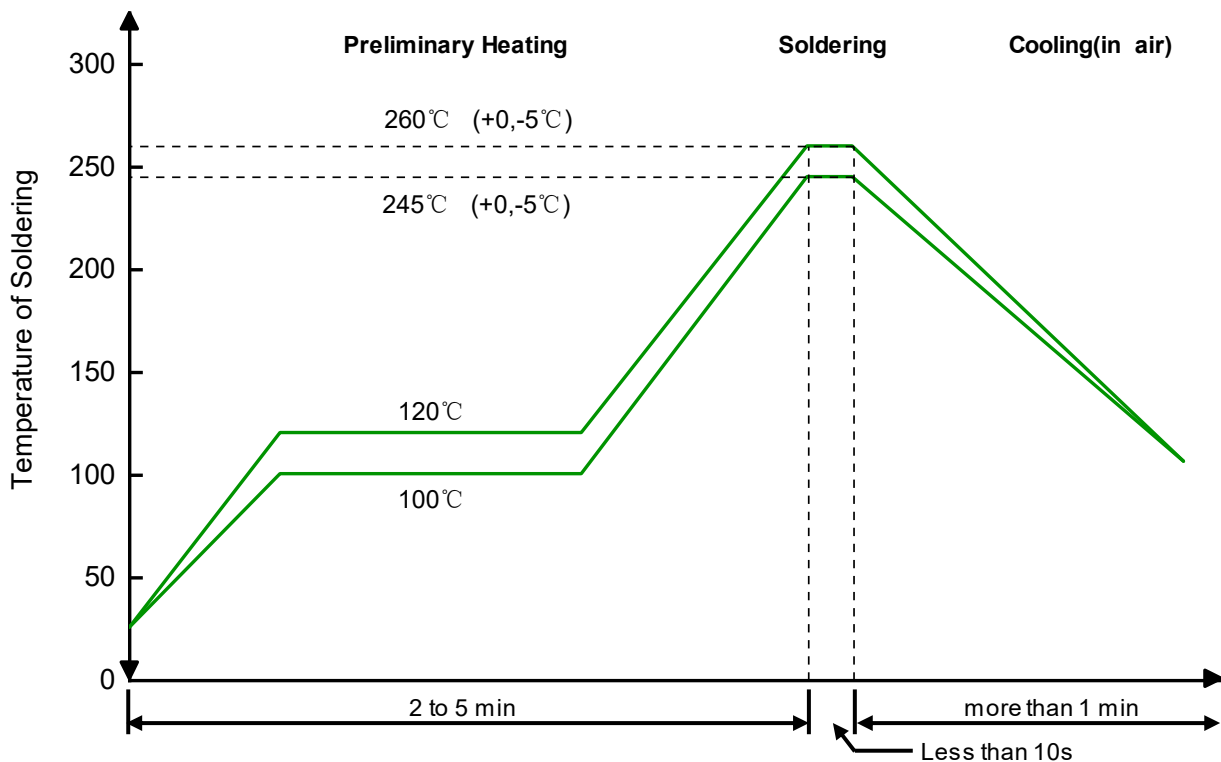
Note

1. Transistor mounted on an FR4 printed-circuit board.

Absolute maximum rating@25°C

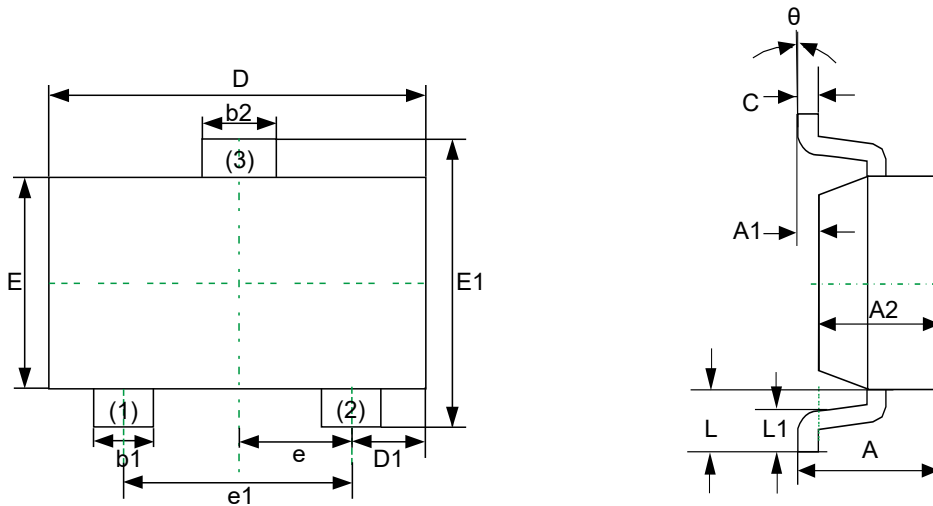
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Collector-Base Breakdown Voltage	BV_{CBO}		-50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}		-40			V
Emitter-Base Breakdown Voltage	BV_{EBO}		-5			V
Collector Cut-off Current ($I_E=0$)	I_{CBO}	$V_{CB}=-30V$			-0.1	μA
Emitter Cut-off Current($I_C=0$)	I_{EBO}	$V_{EB}=-4V$			-0.1	μA
DC Current Gain	h_{FE}	$I_C=-1mA, V_{CE}=-6V$	200		500	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-50mA, I_B=-5mA$	-		-200	mV
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-100mA, I_B=-10mA$			-950	mV
Transition frequency	f_T	$V_{CE}=-12V, I_E=-2mA, f=100MHz$	100			MHz
Output Capacitance	C_{ob}	$V_{CB}=-12V, I_E=0mA, f=1MHz$			2.2	pF

Solder Reflow Recommendation

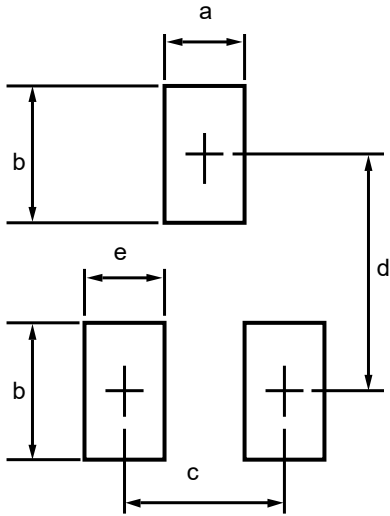


Remark: Pb free for 260°C; Pb for 245°C.

Product dimension (SOT-523)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
D1	0.300	0.500	0.012	0.020
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500TYP		0.020TYP	
e1	0.900	1.100	0.035	0.043
L	0.400REF		0.016REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

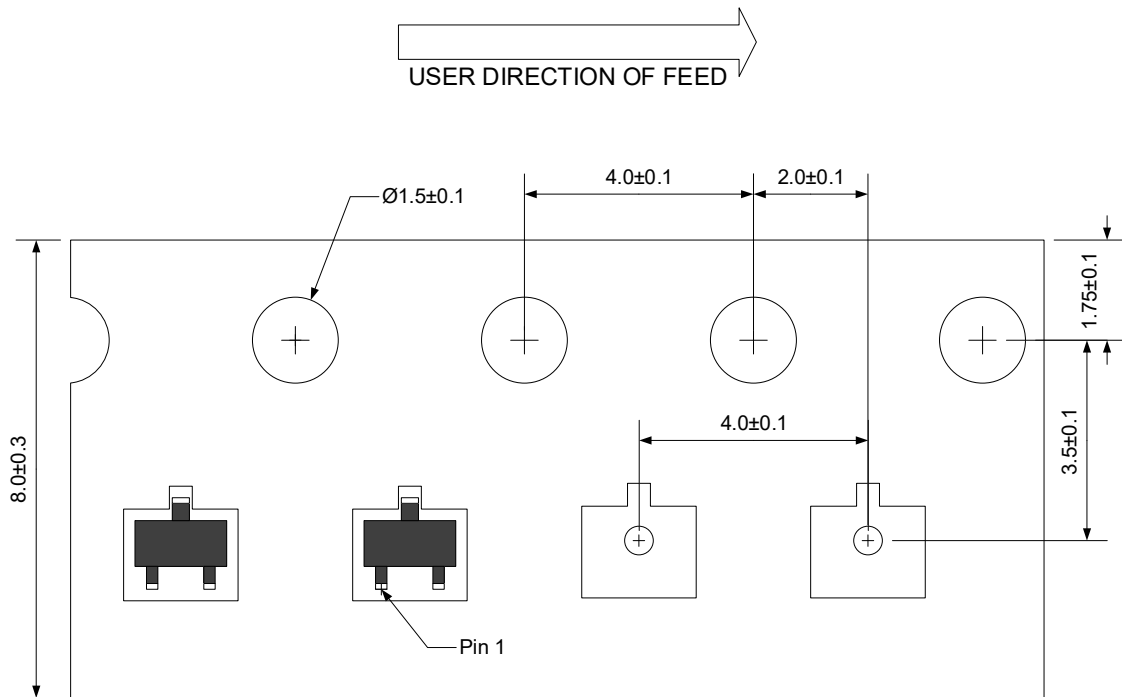


Dim	Millimeters	
	MIN	MAX
a	--	0.5
b	--	0.6
c	--	1.0
d	--	1.24
e	--	0.4

Ordering information


Device	Package	Shipping
PPT523T503E0-2	SOT-523	3000 / Tape & Reel

Load with information



Unit:mm


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