Prisemi®

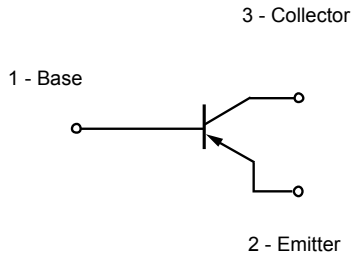
PPT523T503E0-2

PNP general purpose transistor

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



Mechanical Characteristics

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

Electrical characteristics per line@25℃(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)	$R_{th\ j\text{-}a}$	833	K/W

Note

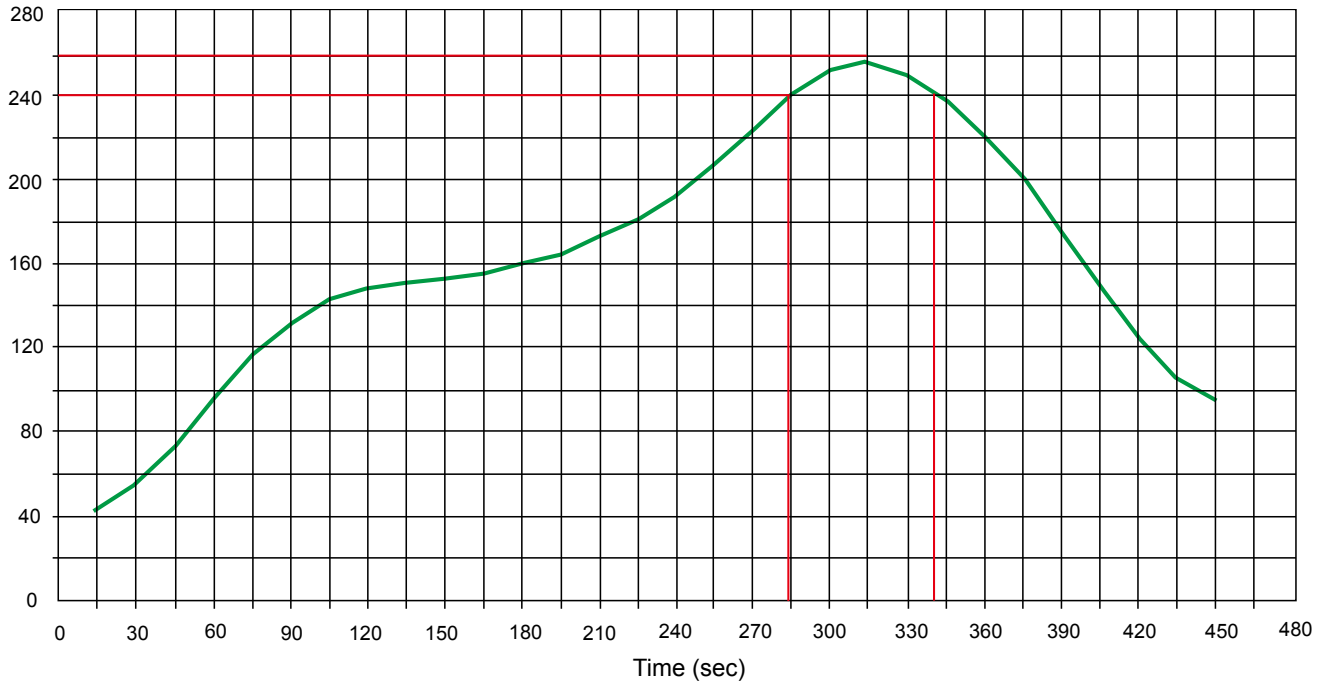
1. Transistor mounted on an FR4 printed-circuit board.

Absolute maximum rating@25℃

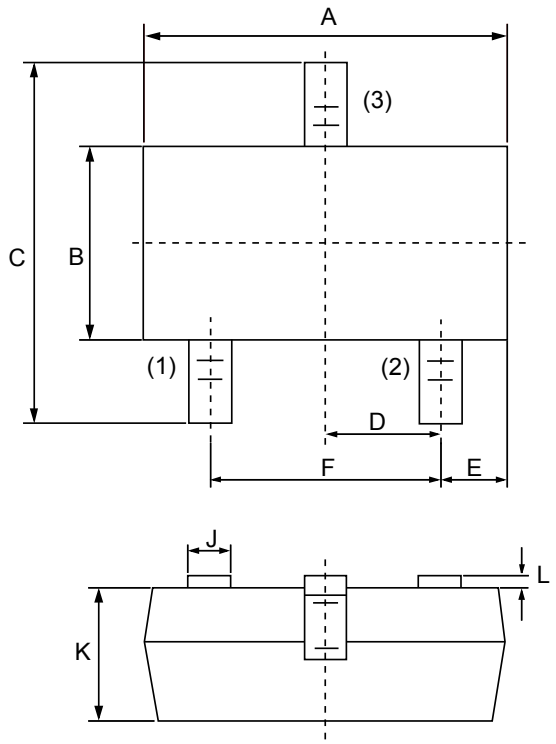
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Collector-Base Breakdown Voltage	BV_{CBO}				-50	V
Collector-Emitter Breakdown Voltage	BV_{CEO}				-40	V
Emitter-Base Breakdown Voltage	BV_{EBO}				-5	V
Collector Cut-off Current (I_E=0)	I_{CBO}	V_{CB}=-30V			-0.1	μA
Emitter Cut-off Current(I_C=0)	I_{EBO}	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
Transition frequency	f_T	V_{CE}=-12V,I_E=-2mA,f=100MHz	100			MHz
Output Capacitance	Cob	V_{CB}=-12V,I_E=0mA,f=1MHz			2.2	pF

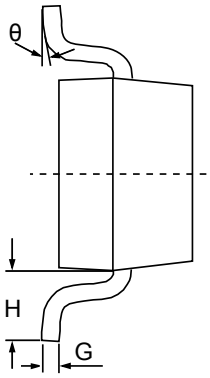
Solder Reflow Recommendation

Peak Temp=257℃, Ramp Rate=0.802deg. ℃/sec

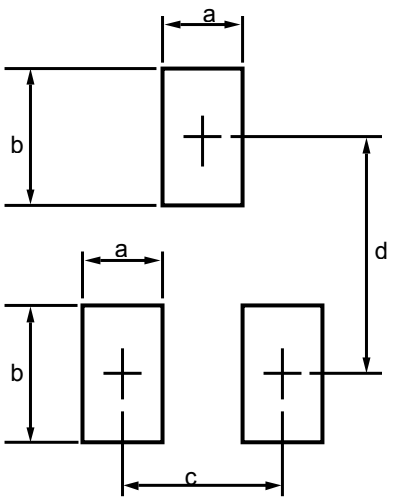


Product dimension（SOT-523）





Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	1.50	1.70	0.059	0.067
B	0.75	0.85	0.030	0.033
C	1.450	1.750	0.057	0.069
D	0.50BSC		0.020BSC	
E	0.30	0.33	0.012	0.015
F	0.900	1.100	0.035	0.043
G	0.100	0.200	0.004	0.008
H	0.550		0.022	
J	0.150	0.250	0.006	0.010
K	0.700	0.900	0.028	0.038
L	0.024	0.027	0.600	0.700
θ	0°	4°	0°	4°



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

Ordering information

Device	Package	Shipping
PPT523T503E0-2	SOT-523 (Pb-Free)	3000 / Tape & Reel

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