

# FrelTec

Mathildenstr. 10A  
82319 Starnberg  
Germany

Transistor Diode  
SOT523

## SOT523

## SPECIFICATION

671	DTA114YExx	ST53	E03
Type	Type	Package	Packing
671: Transistor Diode	DTA114YE	SOT523	E03: Embossed tape and reel for 3k pc (7'REEL)

All products according to RoHS (2015/863/EU)

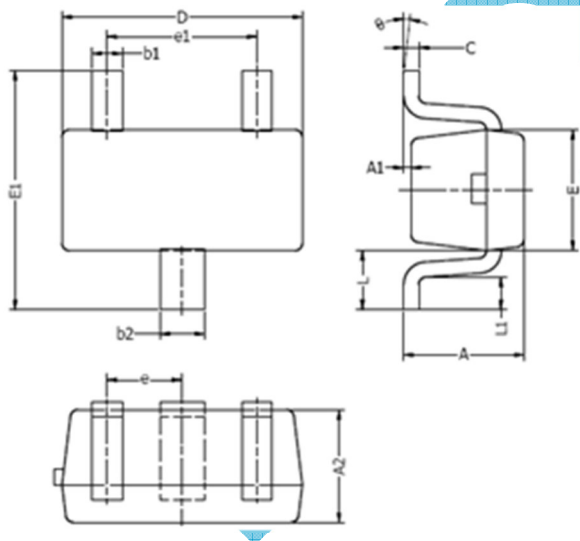
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# SOT523

# FrelTec Transistor Diode

## DTA123EE

### PACKAGE OUTLINE



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
$\theta$	0°	8°	0°	8°

2/3/2022

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## SOT523

Absolute Maximum Ratings TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>CC</sub>	Supply Voltage	-50	V
V <sub>IN</sub>	Input Voltage	-40 ~ +6	V
I <sub>O</sub>	Output Current	-70	mA
I <sub>CM</sub>	Peak Collector Current	-100	mA
P <sub>D</sub>	Power Dissipation	150	mW
T <sub>J</sub>	Junction to Ambient	150	°C
T <sub>STG</sub>	Storage Temperature Range	-55 to +150	°C

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

## Electrical Characteristics (TA = 25°C unless otherwise noted)

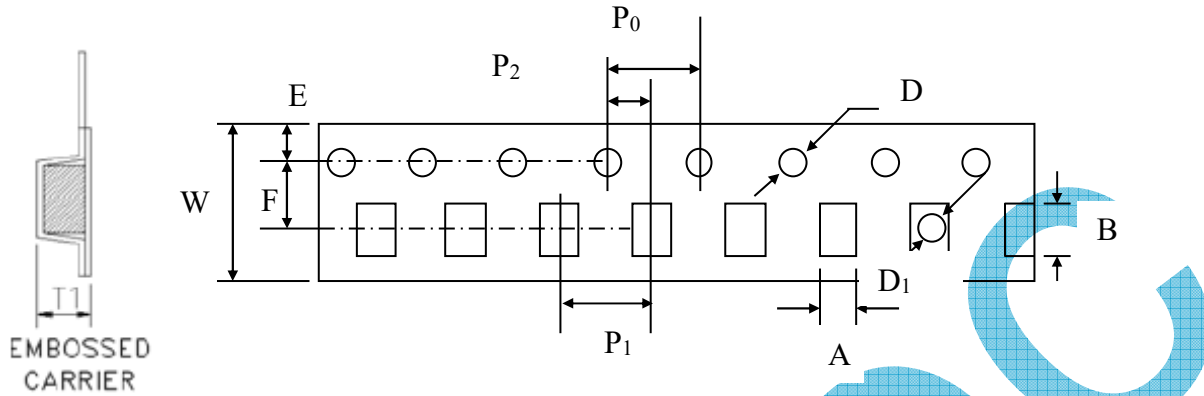
Parameter	Symbol	Test Condition	Limits			Unit
			Min	Type	Max	
Input Voltage	V <sub>I(off)</sub>	V <sub>CC</sub> =-5V, I <sub>O</sub> =-100uA	-0,5			V
	V <sub>I(on)</sub>	V <sub>O</sub> =-0,3V, I <sub>O</sub> =-1mA			-1,4	V
Output Voltage	V <sub>O(on)</sub>	I <sub>O</sub> /I <sub>I</sub> =-5mA/-0,25mA			-0,3	V
Input Current	I <sub>I</sub>	V <sub>I</sub> =-5V			-0,88	mA
Output Current	I <sub>O(off)</sub>	V <sub>CC</sub> =-50V, V <sub>I</sub> =0V			-0,5	uA
DC Current Gain	G <sub>I</sub>	V <sub>O</sub> =-5V, I <sub>O</sub> =-5mA	68			
Input Resistance	R <sub>1</sub>		7	10	13	KΩ
Resistance Ratio	R <sub>2</sub> /R <sub>1</sub>		3,7	4,7	5,7	
Transition Frequency	f <sub>T</sub>	V <sub>O</sub> =-10V, I <sub>O</sub> =-5mA, f=100MHz		250		MHz

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## SPECIFICATION

### *Tape And Reel Package*

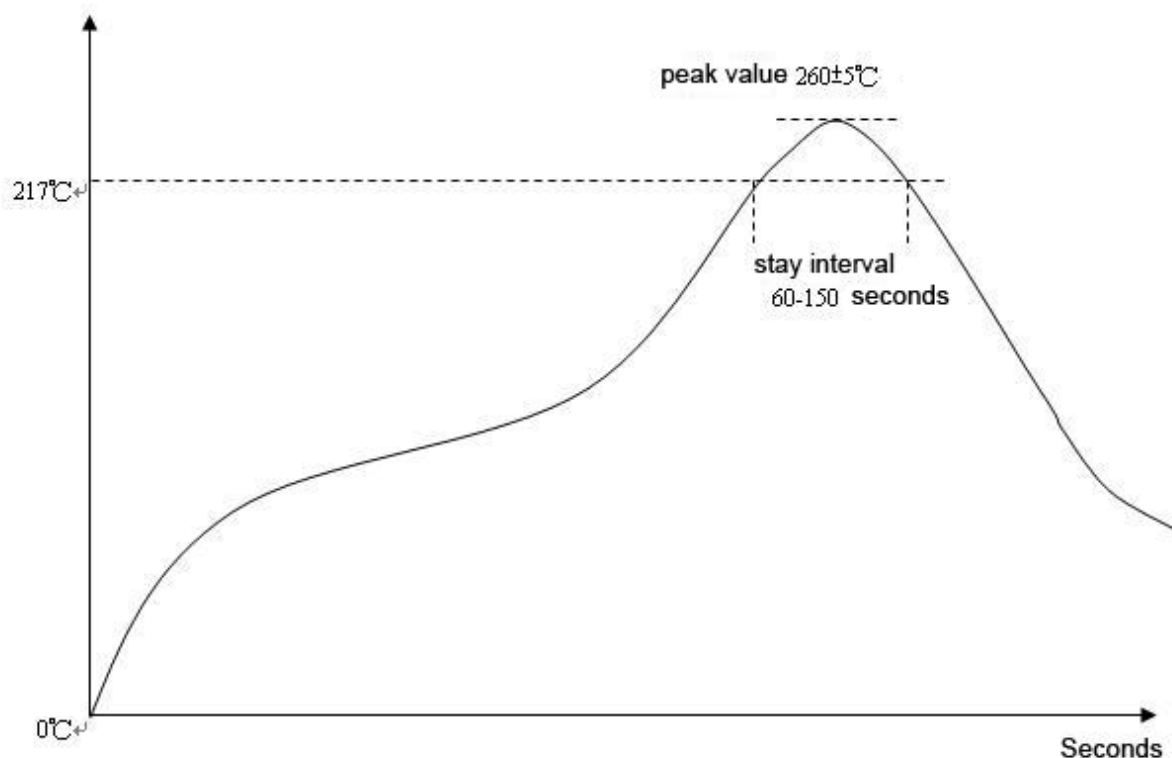


Type	A	B	W	E	F	P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	ΦD	ΦD <sub>1</sub>	T1
	1,73 ±0,1	1,85 ±0,1	8 ±0,30	1,75±0,01	3,5 ±0,05	4,00±0,10	4,00±0,10	2,00±0,05	1,55±0,03	0,4 ±0,5	1 ±0,1

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## Lead Free Reflow Soldering Profile

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### Stock period

The performance of these products, including the solderability, is guaranteed for 12 month, provided that they remain packed as they were when delivered and stored at a temperature of 25°C ± 3°C and a relative humidity less than 80%RH

2/3/2022

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