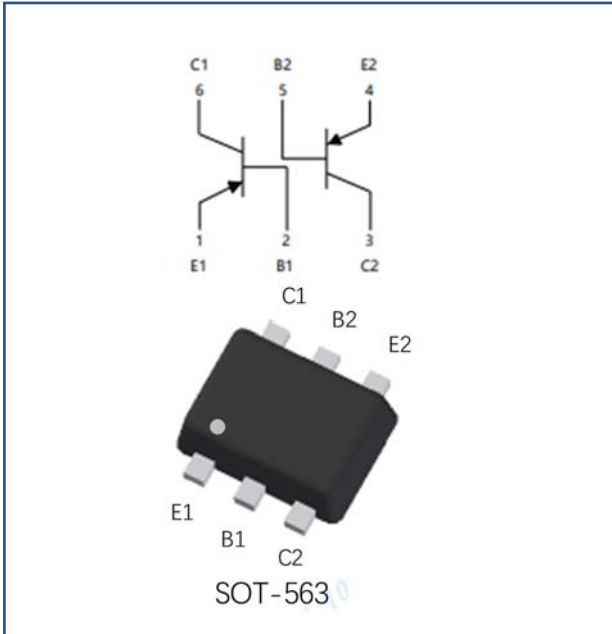


## Dual PNP Small Signal Transistor



### Features

- Moisture sensitivity level 1
- Halogen free and RoHS compliant
- Surface mount package ideally suited for automatic Insertion

### Application

- Signal amplification
- Switching circuit

### Mechanical data

- **Package:** SOT-563
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

### ■ Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Device marking code				T1
Collector-base voltage	V <sub>CB0</sub>	V	I <sub>C</sub> =-50μA, I <sub>E</sub> =0	-60
Collector-emitter voltage	V <sub>CE0</sub>	V	I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-50
Emitter-base voltage	V <sub>EB0</sub>	V	I <sub>E</sub> =-50μA, I <sub>C</sub> =0	-6
Collector current	I <sub>C</sub>	mA		-150
Power dissipation	P <sub>D</sub>	mW		150
Junction temperature	T <sub>J</sub>	°C		-55 to +150
Storage temperature	T <sub>STG</sub>	°C		-55 to +150



# EMT1

RoHS  
COMPLIANT

## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	V	I <sub>C</sub> =-50μA, I <sub>E</sub> =0	-60		
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	V	I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-50		
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	V	I <sub>E</sub> =-50μA, I <sub>C</sub> =0	-6		
Collector cut-off current	I <sub>CBO</sub>	nA	V <sub>CB</sub> =-60V, I <sub>B</sub> =0			-100
Emitter-base cutoff current	I <sub>EBO</sub>	nA	V <sub>EB</sub> =-6V, I <sub>C</sub> =0			-100
DC current gain	h <sub>FE</sub>		V <sub>CE</sub> =-6V, I <sub>C</sub> =-1mA	120		560
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	V	I <sub>C</sub> =-50mA, I <sub>B</sub> =-5mA			-0.5
Transition frequency	f <sub>T</sub>	MHz	V <sub>CE</sub> =-12V, I <sub>E</sub> =2mA, f=100MHz		140	
Output capacitance	C <sub>ob</sub>	pF	V <sub>CB</sub> =-12V, I <sub>E</sub> =0A, f=1MHz			5

## ■ Thermal Characteristics

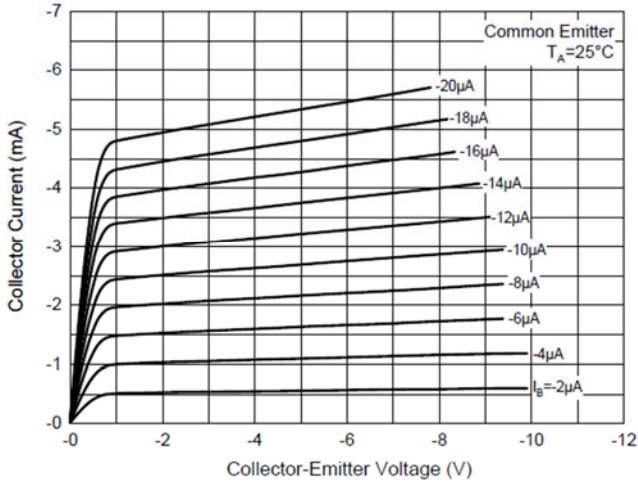
Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R <sub>θJ-A</sub> <sup>(1)</sup>	°C/W	833
Thermal resistance, junction-to-case	R <sub>θJ-C</sub> <sup>(1)</sup>	°C/W	667

### Note:

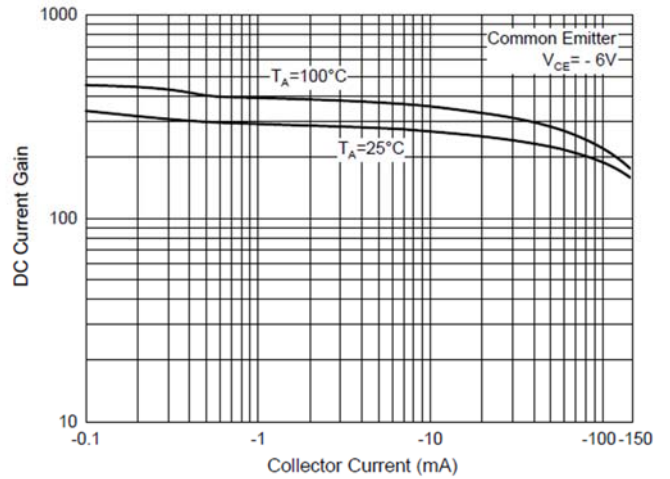
(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 25.4mm\*25.4mm copper pad areas

## Characteristics

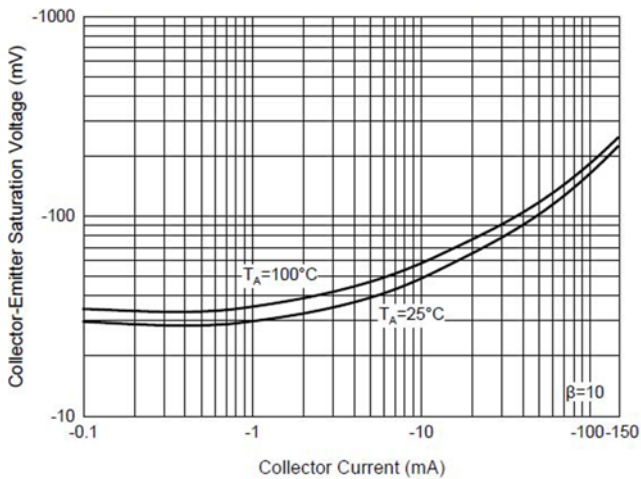
**Fig 1: Static Characteristics**



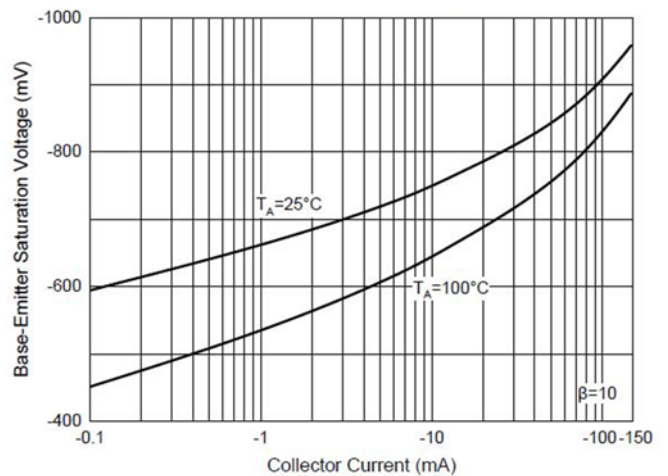
**Fig 2: DC Current Gain Characteristics**



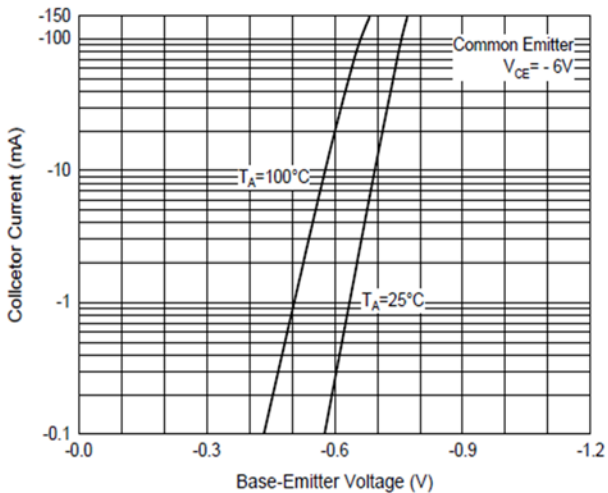
**Fig 3: Collector-Emitter Saturation Voltage**



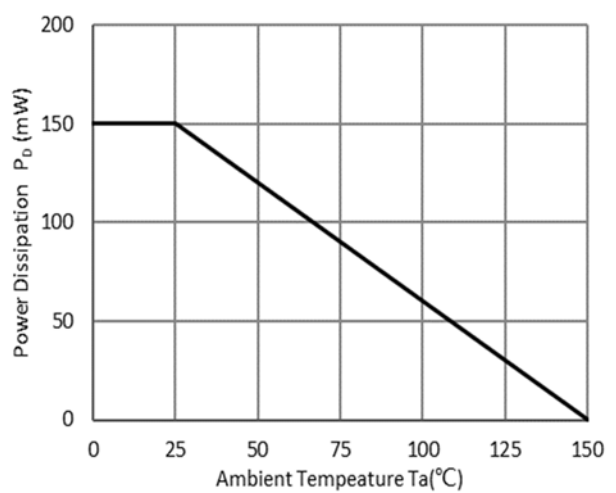
**Fig 4: Base-Emitter Saturation Voltage**



**Fig 5: Base-Emitter on Voltage**



**Fig 6: P<sub>D</sub>-T<sub>a</sub> Curve**





# EMT1

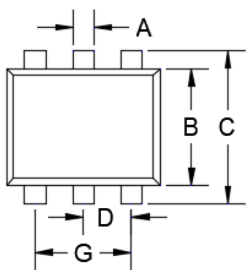
RoHS  
COMPLIANT

## Ordering Information

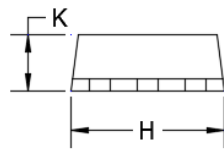
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
EMT1	F2	Approximate 0.0035	3000	30000	120000	7" reel

## Outline Dimensions

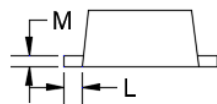
SOT-563



TOP VIEW



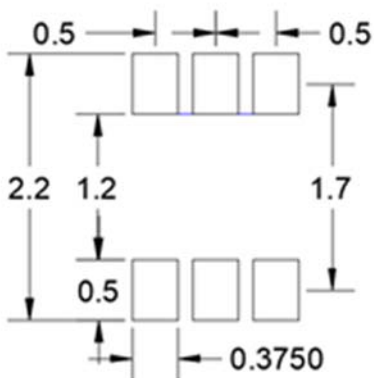
SIDE VIEW



SIDE VIEW

DIM	DIMENSIONS			
	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.006	0.011	0.150	0.300
B	0.043	0.051	1.100	1.300
C	0.059	0.067	1.500	1.700
D	0.016	0.024	0.400	0.600
G	0.035	0.043	0.900	1.100
H	0.059	0.067	1.500	1.700
K	0.021	0.026	0.550	0.650
L	0.004	0.011	0.100	0.300
M	0.004	0.007	0.100	0.180

## Suggested Pad Layout



UNIT:mm



## Disclaimer

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