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捷多邦, 专业PCB打样工厂, 24小时加急出货



Continental Device India Limited

An ISO/TS16949 and ISO 9001 Certified Company

SOT-23 Formed SMD Package

CMBT5551

SILICON N-P-N HIGH-VOLTAGE TRANSISTOR

N-P-N transistor

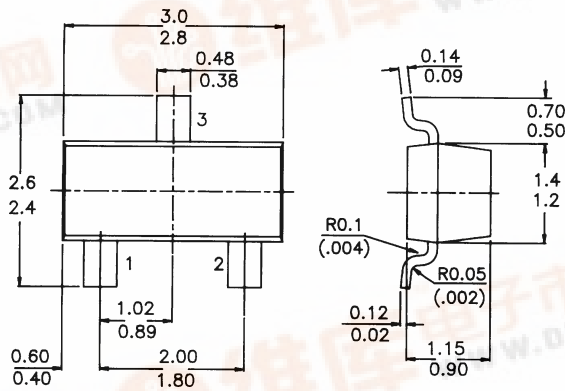
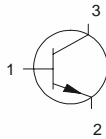
Marking

CMBT5551 = G1

PACKAGE OUTLINE DETAILS ALL DIMENSIONS IN mm

Pin configuration

- 1 = BASE
- 2 = EMITTER
- 3 = COLLECTOR



ABSOLUTE MAXIMUM RATINGS

Collector-base voltage (open emitter)	V_{CBO}	max.	180 V
Collector-emitter voltage (open base)	V_{CEO}	max.	160 V
Collector current	I_C	max.	600 mA
Total power dissipation up to $T_{amb} = 25^\circ\text{C}$	P_{tot}	max.	250 mW
Junction temperature	T_j	max.	150 $^\circ\text{C}$
Collector-emitter saturation voltage $I_C = 50\text{ mA}; I_B = 5\text{ mA}$	V_{CEsat}	max.	0.2 V
D.C. current gain $I_C = 10\text{ mA}; V_{CE} = 5\text{ V}$	h_{FE}	min.	80

RATINGS (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Limiting values

Collector-base voltage (open emitter)	V_{CBO}	max.	180 V
Collector-emitter voltage (open base)	V_{CEO}	max.	160 V
Emitter-base voltage (open collector)	V_{EBO}	max.	6 V



CMBT5551

Collector current	I_C	max.	600 mA
Total power dissipation up to $T_{amb} = 25\text{ }^\circ\text{C}$	P_{tot}	max	250 mW
Junction temperature	T_j	max.	150 $^\circ\text{C}$
Storage temperature range	T_{stg}		-55 to +150 $^\circ\text{C}$

THERMAL RESISTANCE

from junction to ambient	$R_{th\ j-a}$		500 K/W
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CHARACTERISTICS (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Collector cut-off current

$I_E = 0; V_{CB} = 120\text{ V}$	I_{CBO}	max.	50 nA
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$I_E = 0; V_{CB} = 120\text{ V}; T_{amb} = 100\text{ }^\circ\text{C}$	I_{CBO}	max.	50 μA
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Emitter cut-off current

$I_C = 0; V_{EB} = 4\text{ V}$	I_{EBO}	max.	50 nA
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Breakdown voltages

$I_C = 1\text{ mA}; I_B = 0$	$V_{(BR)CEO}$	min.	160 V
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$I_C = 100\text{ }\mu\text{A}; I_E = 0$	$V_{(BR)CBO}$	min.	180 V
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$I_C = 0; I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	min.	6 V
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Saturation voltages

$I_C = 10\text{ mA}; I_B = 1\text{ mA}$	V_{CEsat}	max.	0.15 V
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	V_{BEsat}	max.	1 V
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$I_C = 50\text{ mA}; I_B = 5\text{ mA}$	V_{CEsat}	max.	0.2 V
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	V_{BEsat}	max.	1 V
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D.C. current gain

$I_C = 1\text{ mA}; V_{CE} = 5\text{ V}$	h_{FE}	min.	80
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$I_C = 10\text{ mA}; V_{CE} = 5\text{ V}$	h_{FE}	min.	80
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		max.	250
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$I_C = 50\text{ mA}; V_{CE} = 5\text{ V}$	h_{FE}	min.	30
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Small-signal current gain

$I_C = 1\text{ mA}; V_{CE} = 10\text{ V}; f = 1\text{ kHz}$	h_{fe}	min.	50
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		max.	200
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Output capacitance at $f = 1\text{ MHz}$

$I_E = 0; V_{CB} = 10\text{ V}$	C_o	max.	6 pF
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Input capacitance at $f = 1\text{ MHz}$

$I_C = 0; V_{EB} = 0.5\text{ V}$	C_i	max.	30 pF
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Transition frequency at $f = 100\text{ MHz}$

$I_C = 10\text{ mA}; V_{CE} = 10\text{ V}$	f_T	min.	100 MHz
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		max.	300 MHz
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Customer Notes

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/ CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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