

SOT-23 Formed SMD Package

CMBTA55
CMBTA56

SILICON EPITAXIAL TRANSISTORS

P-N-P transistor

Marking

CMBTA55 = 2H

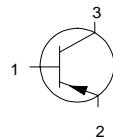
CMBTA56 = 2G

PACKAGE OUTLINE DETAILS

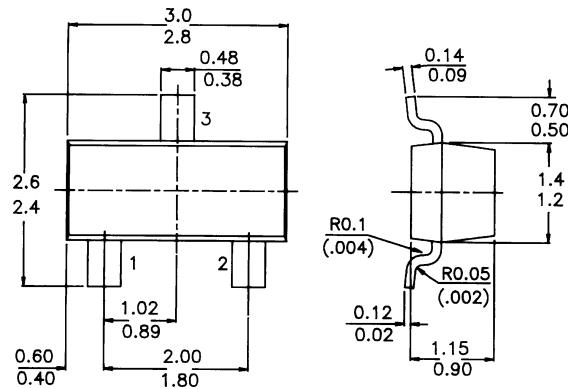
ALL DIMENSIONS IN mm

Pin configuration

- 1 = BASE
- 2 = Emitter
- 3 = COLLECTOR



2



ABSOLUTE MAXIMUM RATINGS

	CMBTA55	A56	
Collector-base voltage (open emitter)	$-V_{CBO}$ max. 60	80	V
Collector-emitter voltage (open base)	$-V_{CEO}$ max. 60	80	V
Emitter-base voltage (open collector)	$-V_{EBO}$ max.	4	V
Collector current (d.c.)	$-I_C$ max.	500	mA
Total power dissipation up to $T_{amb} = 25^\circ C$	P_{tot}	250	mW
D.C. current gain $-I_C = 100$ mA; $-V_{CE} = 1$ V	h_{FE}	min.	100
Transition frequency at $f = 100$ MHz $-I_C = 100$ mA; $-V_{CE} = 1$ V	f_T	min.	50
Collector-emitter saturation voltage $-I_C = 100$ mA; $I_B = 10$ mA	V_{CEsat}	max.	0.25
			V

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

Limiting values

		CMBTA55	A56
Collector-base voltage (open emitter)	$-V_{CBO}$	max. 60	80 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max. 60	80 V
Emitter-base voltage (open collector)	$-V_{EBO}$	max. 4	V
Collector current (d.c.)	$-I_C$	max. 500	mA
Total power dissipation up to $T_{amb} = 25^\circ C$	P_{tot}	max. 250	mW
Storage temperature	T_{stg}	-55 to +150	$^\circ C$
Junction temperature	T_j	max. 150	$^\circ C$

THERMAL CHARACTERISTICS

$$T_j = P (R_{th\ j-t} + R_{th\ t-s} + R_{th\ s-a}) + T_{amb}$$

Thermal resistance

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

		CMBTA55	A56
Collector-emitter breakdown voltage $-I_C = 1\ mA; I_B = 0$	$-V_{(BR)CEO}$	min. 60	80 V
Emitter-base breakdown voltage $-I_C = 0; I_E = 100\ \mu A$	$-V_{(BR)EBO}$	min. 4	V
Collector cut-off current $-V_{CE} = 60\ V; I_B = 0$	$-I_{CEO}$	max. 0.1	μA
$-V_{CB} = 60\ V; I_E = 0$	$-I_{CBO}$	max. 0.1	μA
$-V_{CB} = 80\ V; I_E = 0$	$-I_{CBO}$	max. 0.1	μA
Saturation voltages $-I_C = 100\ mA; -I_B = 10\ mA$	$-V_{CEsat}$	max. 0.25	V
Base-emitter On voltage $-I_C = 100\ mA; -V_{CE} = 1\ V$	$-V_{BE(on)}$	max. 1.2	V
D.C. current gain $-I_C = 10\ mA; -V_{CE} = 1\ V$	h_{FE}	min. 100	
$-I_C = 100\ mA; -V_{CE} = 1\ V$	h_{FE}	min. 100	
Transition frequency at $f = 100\ MHz$ $-I_C = 100\ mA; -V_{CE} = 1\ V$	f_T	min. 50	MHz

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