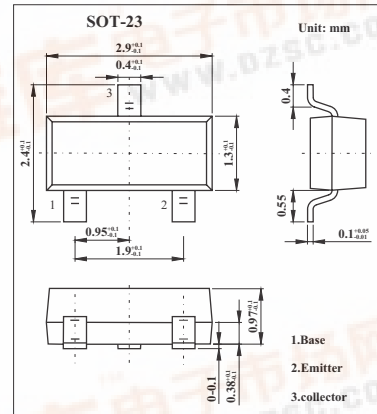


SMD Type Transistors

General Purpose Transistor  
MMBTA70

■ Features

- General Purpose Transistor



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-emitter voltage	V <sub>CEO</sub>	-40	V
Emitter-base voltage	V <sub>EBO</sub>	-4	V
Collector current	I <sub>C</sub>	-100	mA
Total Device Dissipation FR-5 Board (* 1) @T <sub>A</sub> = 25°C	P <sub>D</sub>	225	mW
Derate above 25°C		1.8	mW/°C
Thermal Resistance, Junction-to-Ambient	R <sub>θJA</sub>	556	°C/W
Total Device Dissipation Alumina Substrate, (* 2) @T <sub>A</sub> = 25°C	P <sub>D</sub>	300	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance, Junction-to-Ambient	R <sub>θJA</sub>	417	°C/W
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

\* 1. FR-5 = 1.0 □ 0.75 □ 0.062 in.

\* 2. Alumina = 0.4 □ 0.3 □ 0.024 in. 99.5% alumina.

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -1.0 mA, I <sub>B</sub> = 0	-40			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -100 μA, I <sub>C</sub> = 0	-4.0			V
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = -30 V, I <sub>E</sub> = 0			-100	nA
DC current gain	H <sub>FE</sub>	I <sub>C</sub> = -5.0 mA, V <sub>CE</sub> = -10 V	40		400	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -10 mA, I <sub>B</sub> = -1.0 mA			-0.25	V
Current-gain-bandwidth product	f <sub>r</sub>	I <sub>C</sub> = -5.0 mA, V <sub>CE</sub> = -10 V, f = 100 MHz	125			MHz
Output capacitance	C <sub>obo</sub>	V <sub>CB</sub> = -10 V, I <sub>E</sub> = 0, f = 1.0 MHz			4.0	pF

■ Marking

Marking	M2C
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