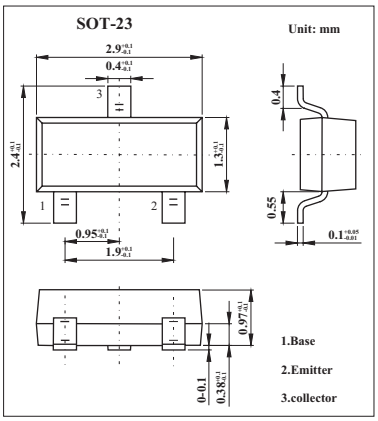
General Purpose Transistor

MMBTA70



■ Features

● General Purpose Transistor

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-emitter voltage	V_{CEO}	-40	V
Emitter-base voltage	V_{EBO}	-4	V
Collector current	I_C	-100	mA
Total Device Dissipation FR-5 Board (* 1) @T_A = 25℃ Derate above 25℃	P_D	225 1.8	mW mW/℃
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	556	℃/W
Total Device Dissipation Alumina Substrate, (* 2) @T_A = 25℃ Derate above 25℃	P_D	300 2.4	mW mW/℃
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	417	℃/W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* 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℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C = -1.0 mA, I_B = 0	-40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E = -100 μA, I_C = 0	-4.0			V
Collector cutoff current	I_{CBO}	V_{CB} = -30 V, I_E = 0			-100	nA
DC current gain	H_{FE}	I_C = -5.0 mA, V_{CE} = -10 V	40		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = -10 mA, I_B = -1.0 mA			-0.25	V
Current-gain-bandwidth product	f_T	I_C = -5.0 mA, V_{CE} = -10 V, f = 100 MHz	125			MHz
Output capacitance	C_{obo}	V_{CB} = -10 V, I_E = 0, f = 1.0 MHz			4.0	pF

■ Marking

Marking	M2C