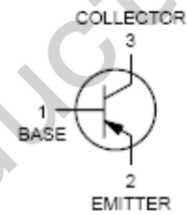


■ Features

- SOT-23 package


SOT-23

1. BASE
2. EMITTER
3. COLLECTOR


■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	MMBTA55	MMBTA56	Unit
Collector-emitter voltage	V_{CE0}	-60	-80	V
Collector-base voltage	V_{CB0}	-60	-80	V
Emitter-base voltage	V_{EB0}	-4.0		V
Collector current	I_C	-500		mA
Total Device Dissipation FR-5 Board(* 1) Derate above 25°C	P_D	225	1.8	mW mW/°C
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	556		°C/W
Total Device Dissipation Alumina Substrate, (* 2) Derate above 25°C	P_D	300	2.4	mW mW/°C
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	417		°C/W
Junction temperature	T_j	150		°C
Storage temperature	T_{stg}	-55 to +150		°C

* 1. FR-5 = 1.0 X 0.75 X 0.062 in.

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

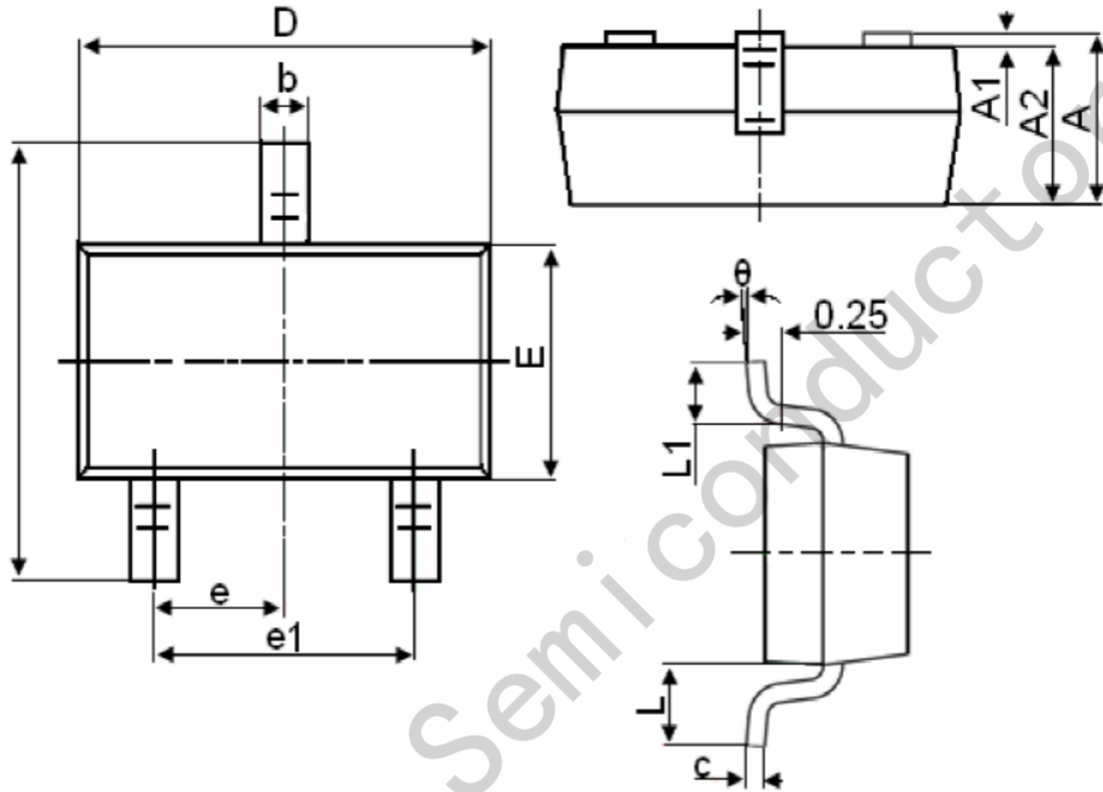
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-emitter breakdown voltage* MMBTA55 MMBTA56	V _{(BR)CEO}	I _C = -1.0 mA, I _B = 0	-60			V
			-80			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = -100 μA, I _C = 0	-4.0			V
Base cutoff current	I _{CES}	V _{CE} = -60 V, I _B = 0			-0.1	μA
Collector cutoff current MMBTA55 MMBTA56	I _{CBO}	V _{CB} = -60 V, I _E = 0			-0.1	μA
		V _{CB} = -80 V, I _E = 0			-0.1	μA
DC current gain	H _{FE}	I _C = -10 mA, V _{CE} = -1.0 V	100			
		I _C = -100 mA, V _{CE} = -1.0 V	100			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = -100 mA, I _B = -10 mA			-0.25	V
Base-emitter saturation voltage	V _{BE(on)}	I _C = -100 mA, V _{CE} = -1.0 V			-1.2	V
Current-gain-bandwidth product	f _T	I _C = -100 mA, V _{CE} = -1.0 V, f = 100 MHz	50			MHz

* Pulse test: pulse width ≤ 300 μs, duty cycle ≤ 2.0%.

Package Information

SOT-23



Symbol	Dimensions in Millimeters (mm)		Dimensions in Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

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