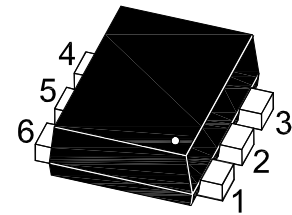
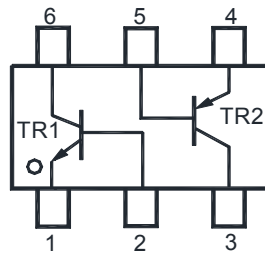


MMBT7073DE

NPN / PNP Silicon General Purpose Double Transistor

for switching and amplifier applications.



1. Emitter 2. Base 3. Collector
4. Emitter 5. Base 6. Collector
SOT-563 Plastic package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$) TR1

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	7	V
Collector Current	I_{C}	150	mA

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$) TR2

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{\text{CBO}}$	60	V
Collector Emitter Voltage	$-V_{\text{CEO}}$	50	V
Emitter Base Voltage	$-V_{\text{EBO}}$	6	V
Collector Current	$-I_{\text{C}}$	150	mA

Common Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	150 ¹⁾	mW
Operation Temperature Range	T_{j}	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

¹⁾ 120mW per element must not be exceeded.

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 ISO 9001 : 2008 Certificate No. 50114012
 OHSAS 18001 : 2007 Certificate No. 05131506008
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Characteristics at $T_a = 25\text{ }^\circ\text{C}$ TR1

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 6\text{ V}$, $I_C = 1\text{ mA}$	h_{FE}	120	-	560	-
Collector Base Cutoff Current at $V_{CB} = 60\text{ V}$	I_{CBO}	-	-	100	nA
Collector Emitter Cutoff Current at $V_{EB} = 7\text{ V}$	I_{EBO}	-	-	100	nA
Collector Base Breakdown Voltage at $I_C = 50\text{ }\mu\text{A}$	$V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at $I_E = 50\text{ }\mu\text{A}$	$V_{(BR)EBO}$	7	-	-	V
Collector Emitter Saturation Voltage at $I_C = 50\text{ mA}$, $I_B = 5\text{ mA}$	$V_{CE(sat)}$	-	-	0.4	V
Gain Bandwidth Product at $-I_E = 2\text{ mA}$, $V_{CE} = 12\text{ V}$, $f = 100\text{ MHz}$	f_T	-	180	-	MHz
Collector Output Capacitance at $V_{CB} = 12\text{ V}$, $I_E = 0\text{ A}$, $f = 1\text{ MHz}$	C_{ob}	-	-	3.5	pF

Characteristics at $T_a = 25\text{ }^\circ\text{C}$ TR2

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 6\text{ V}$, $-I_C = 1\text{ mA}$	h_{FE}	120	-	560	-
Collector Base Cutoff Current at $-V_{CB} = 60\text{ V}$	$-I_{CBO}$	-	-	100	nA
Collector Emitter Cutoff Current at $-V_{EB} = 6\text{ V}$	$-I_{EBO}$	-	-	100	nA
Collector Base Breakdown Voltage at $-I_C = 50\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at $-I_E = 50\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	6	-	-	V
Collector Emitter Saturation Voltage at $-I_C = 50\text{ mA}$, $-I_B = 5\text{ mA}$	$-V_{CE(sat)}$	-	-	0.5	V
Gain Bandwidth Product at $I_E = 2\text{ mA}$, $-V_{CE} = 12\text{ V}$, $f = 100\text{ MHz}$	f_T	-	140	-	MHz
Collector Output Capacitance at $-V_{CB} = 12\text{ V}$, $I_E = 0\text{ A}$, $f = 1\text{ MHz}$	C_{ob}	-	-	5	pF

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TR1 (NPN)

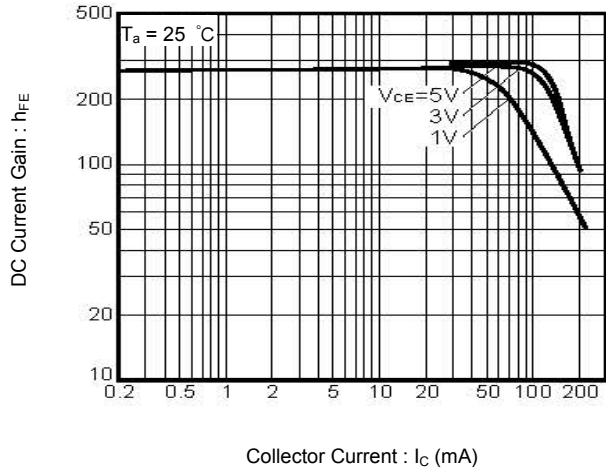


Figure 1. DC Current Gain vs. Collector Current

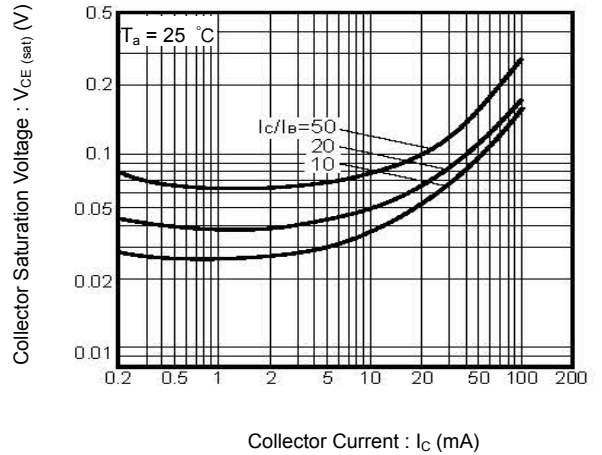


Figure 2. Collector-Emitter Saturation Voltage vs. Collector Current

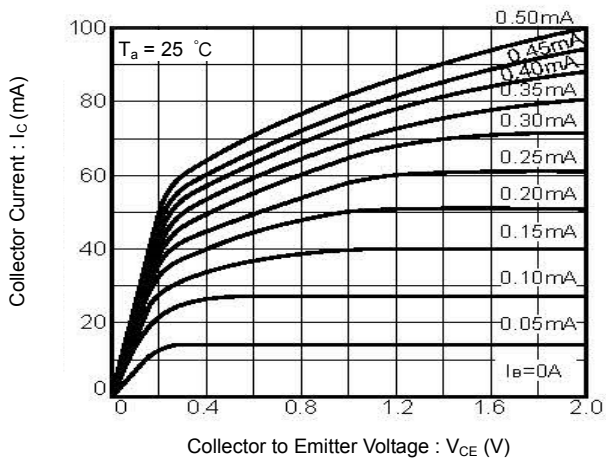


Figure 3. Grounded Emitter output Characteristics

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TR2 (PNP)

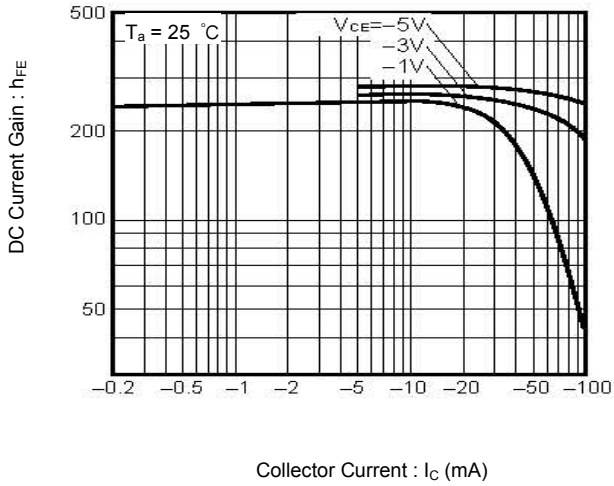


Figure 1. DC Current Gain vs. Collector Current

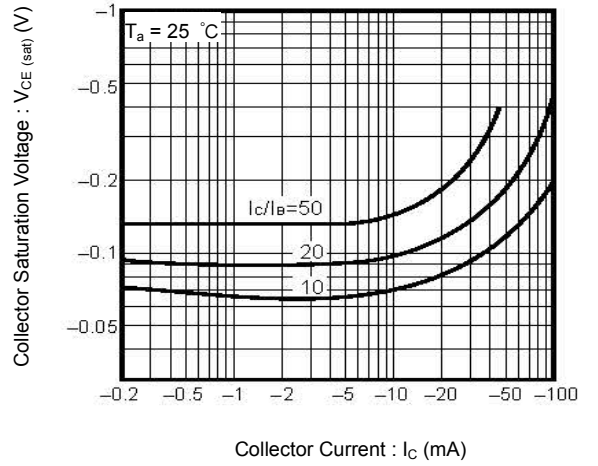


Figure 2. Collector-Emitter Saturation Voltage vs. Collector Current

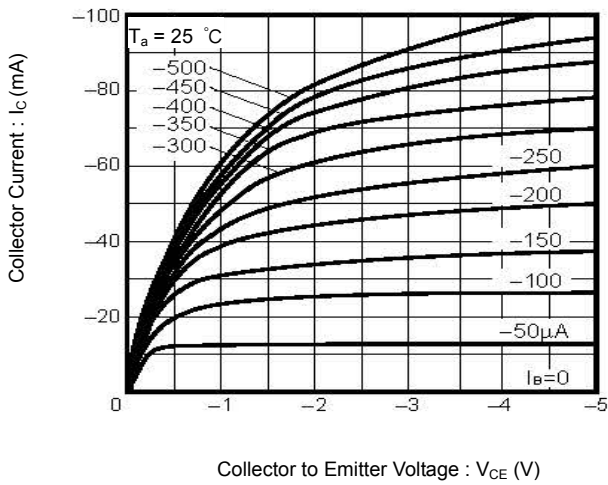


Figure 3. Grounded Emitter output Characteristics

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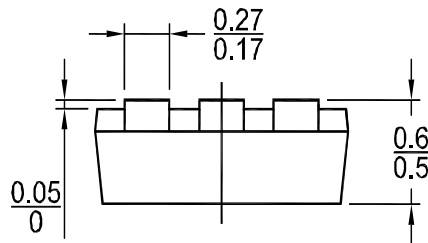
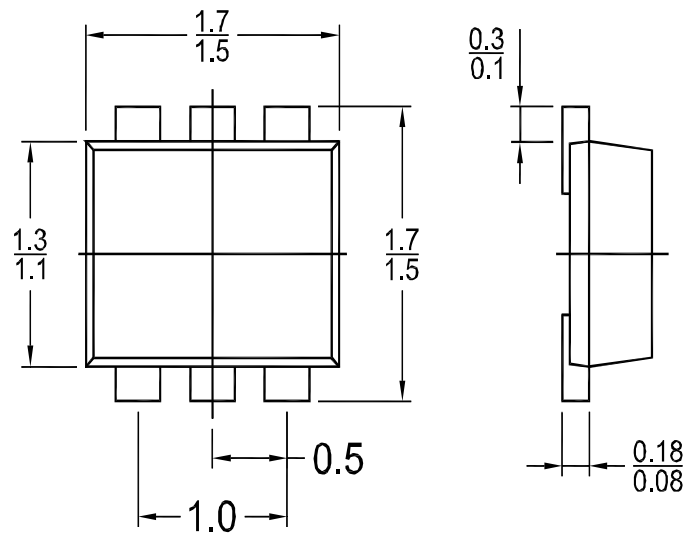
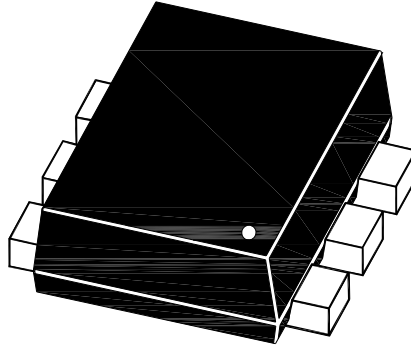


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SOT-563 Package Outline Dimensions (Units: mm)



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