

SOT-563 Plastic-Encapsulate Transistors

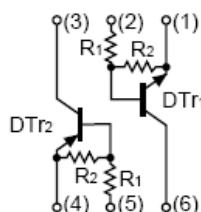
EMD10 General purpose transistors (dual transistors)

FEATURES

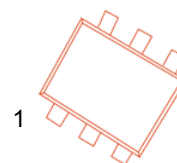
- Both the DTC123J chip and DTA123J chip in a package.
- Mounting possible with SOT-563 automatic mounting machines.
- Transistor elements are independent, eliminating interference.
- Mounting cost and area be cut in half.

Marking: D10

Equivalent circuit



SOT-563



T_{R1} Absolute maximum ratings ($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	50	V
Input voltage	V_{IN}	-5~12	V
Output current	I_O	100	mA
	$I_{C(MAX)}$	100	
Power dissipation	P_d	150	mW
Junction temperature	T_j	150	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-55~150	$^{\circ}\text{C}$

T_{R1} Electrical characteristics ($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$	0.5			V	$V_{CC}=5V, I_O=100\mu A$
	$V_{I(on)}$			1.1		$V_O=0.3V, I_O=5mA$
Output voltage	$V_{O(on)}$		0.1	0.3	V	$I_O/I_I=5mA/0.25mA$
Input current	I_I			3.6	mA	$V_I=5V$
Output current	$I_{O(off)}$			0.5	μA	$V_{CC}=50V, V_I=0$
DC current gain	G_I	80				$V_O=5V, I_O=10mA$
Input resistance	R_1	1.54	2.2	2.86	K Ω	-
Resistance ratio	R_2/R_1	17	21	26		-
Transition frequency	f_T		250		MHz	$V_{CE}=10V, I_E=5mA, f=100MHz$

T_{R2} Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V _{CC}	-50	V
Input voltage	V _{IN}	-12~5	V
Output current	I _O	-100	mA
	I _{C(MAX)}	-100	
Power dissipation	P _d	150	mW
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55~150	°C

T_{R2} Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Input voltage	V _{I(off)}	-0.5			V	V _{CC} =-5V, I _O =-100μA
	V _{I(on)}			-1.1		V _O =-0.3V, I _O =-5mA
Output voltage	V _{O(on)}		-0.1	-0.3	V	I _O /I _I =-5mA/-0.25mA
Input current	I _I			-3.6	mA	V _I =-5V
Output current	I _{O(off)}			-0.5	μA	V _{CC} =-50V, V _I =0
DC current gain	G _I	80				V _O =-5V, I _O =-10mA
Input resistance	R ₁	1.54	2.2	2.86	KΩ	-
Resistance ratio	R ₂ /R ₁	17	21	26		-
Transition frequency	f _T		250		MHz	V _{CE} =-10V, I _E =-5mA, f=100MHz