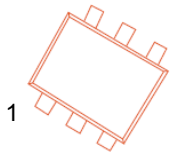
General purpose transistors (dual transistors)

FEATURES

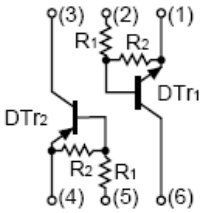
- Both the DTC144E chip and DTA144E chip in a package
- Mounting possible with SOT-563 automatic mounting machines.
- Transistor elements are independent, eliminating interference.
- Mounting cost and area be cut in half.

SOT-563



Marking: D12

Equivalent circuit



T_{R1} Absolute maximum ratings (Ta=25℃)

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	50	V
Input voltage	V_{IN}	-10~40	V
Output current	I_O	100	mA
	$I_{C(MAX)}$	100	
Power dissipation	Pd	150	mW
Junction temperature	Tj	150	℃
Storage temperature	Tstg	-55~150	℃

T_{R1} Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$			0.5	V	V_{CC}=5V, I_O=100μA
	$V_{I(on)}$	3				V_O=0.3V, I_O=2mA
Output voltage	$V_{O(on)}$		0.1	0.3	V	I_O/I_I=10mA/0.5mA
Input current	I_I			0.18	mA	V_I=5V
Output current	$I_{O(off)}$			0.5	μA	V_{CC}=50V, V_I=0
DC current gain	G_I	68				V_O=5V, I_O=5mA
Input resistance	R_1	32.9	47	61.1	KΩ	-
Resistance ratio	R_2/R_1	0.8	1	1.2		-
Transition frequency	f_T		250		MHz	V_{CE}=10V, I_E=5mA, f=100MHz

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

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	-50	V
Input voltage	V_{IN}	-40~10	V
Output current	I_O	-100	mA
	$I_{C(MAX)}$	-100	
Power dissipation	Pd	150	mW
Junction temperature	Tj	150	℃
Storage temperature	Tstg	-55~150	℃

T_{R2} Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$			-0.5	V	V_{CC}=-5V, I_O=-100μA
	$V_{I(on)}$	-3				V_O=-0.3V, I_O=-2mA
Output voltage	$V_{O(on)}$		-0.1	-0.3	V	I_O/I_I=-10mA/-0.5mA
Input current	I_I			-0.18	mA	V_I=-5V
Output current	$I_{O(off)}$			-0.5	μA	V_{CC}=-50V, V_I=0
DC current gain	G_I	68				V_O=-5V, I_O=-5mA
Input resistance	R_1	32.9	47	61.1	KΩ	-
Resistance ratio	R_2/R_1	0.8	1	1.2		-
Transition frequency	f_T		250		MHz	V_{CE}=-10V, I_E=-5mA, f=100MHz