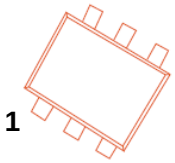
dual digital transistors (NPN+PNP)

SOT-563

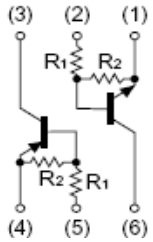


FEATURES

Two DTA114Y and DTC114Y transistors are built-in a package

Marking: D9

Equivalent circuit



DTr1 Absolute maximum ratings (T_a=25℃)

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	50	V
Input voltage	V_{IN}	-6~+40	V
Output current	I_O	70	mA
	$I_{C(MAX)}$	100	
Power dissipation	P_d	150	mW
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55~150	℃

Electrical characteristics (T_a=25℃)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Input voltage	$V_{I(off)}$			0.3	V	V_{CC}=5V ,I_O=100μA
	$V_{I(on)}$	1.4				V_O=0.3V ,I_O=1mA
Output voltage	$V_{O(on)}$		0.1	0.3	V	I_O=5mA, I_I=0.25mA
Input current	I_I			0.88	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	7	10	13	KΩ	
Resistance ratio	R_2/R_1	3.7	4.7	5.7		
Transition frequency	f_T		250		MHz	V_O=10V ,I_O=5mA,f=100MHz

DTr2 Absolute maximum ratings (T_a=25℃)

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	-50	V
Input voltage	V_{IN}	-40~+6	V
Output current	I_O	-70	mA
	$I_{C(MAX)}$	-100	
Power dissipation	P_d	150	mW
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55~150	℃

Electrical characteristics (T_a=25℃)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Input voltage	$V_{I(off)}$			-0.3	V	V_{CC}=-5V ,I_O=-100μA
	$V_{I(on)}$	-1.4				V_O=-0.3V ,I_O=-1mA
Output voltage	$V_{O(on)}$		-0.1	-0.3	V	I_O=-5mA,I_I=-0.25mA
Input current	I_I			-0.88	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	7	10	13	KΩ	
Resistance ratio	R_2/R_1	3.7	4.7	5.7		
Transition frequency	f_T		250		MHz	V_O=-10V ,I_O=-5mA,f=100MHz