

Digital transistors (built-in resistors)

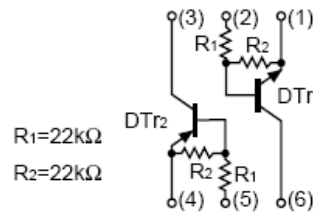
EMD2 General purpose transistors (dual transistors)

FEATURES

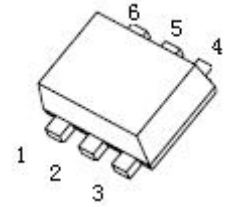
- Both the DTA124E chip and DTC124E chip in a package
- Mounting possible with SOT-563 automatic mounting machines
- Transistor elements are independent, eliminating interference
- Mounting cost and area be cut in half

Marking: D2

Equivalent circuit



SOT-563



Absolute maximum ratings(Ta=25°C)

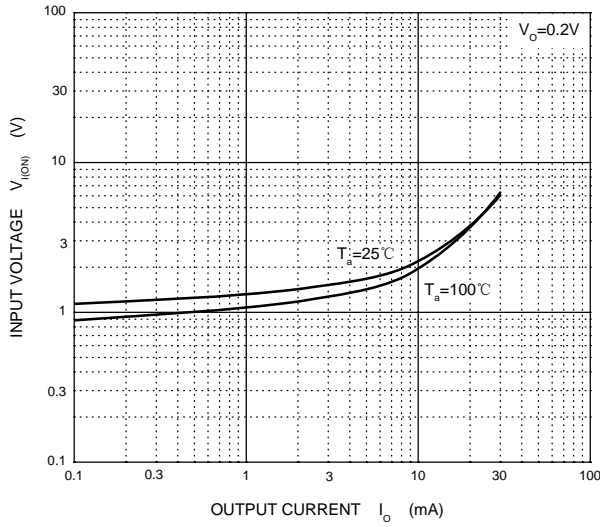
Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	50	V
Input voltage	V_{IN}	-10~40	V
Output current	I_o	30	mA
	$I_{C(MAX)}$	100	
Power dissipation	P_d	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~150	°C

Electrical characteristics (Ta=25°C)

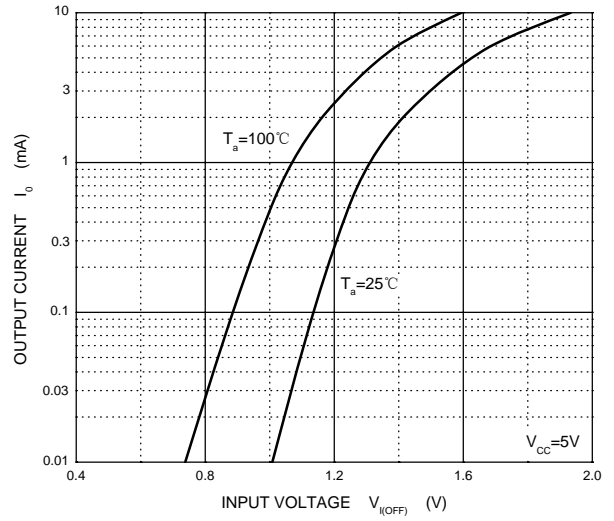
Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$	0.5			V	$V_{CC}=5V, I_o=100\mu A$
	$V_{I(on)}$			3		$V_o=0.2V, I_o=5mA$
Output voltage	$V_{O(on)}$		0.1	0.3	V	$I_o/I_i=10mA/0.5mA$
Input current	I_i			0.36	mA	$V_i=5V$
Output current	$I_{O(off)}$			0.5	μA	$V_{CC}=50V, V_i=0$
DC current gain	G_I	56				$V_o=5V, I_o=5mA$
Input resistance	R_1	15.4	22	28.6	K Ω	-
Resistance ratio	R_2/R_1	0.8	1	1.2		-
Transition frequency	f_T		250		MHz	$V_{CE}=10V, I_E=5mA, f=100MHz$



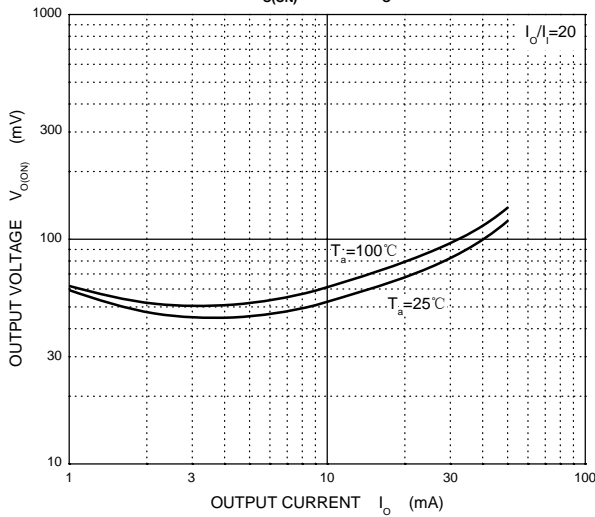
ON Characteristics



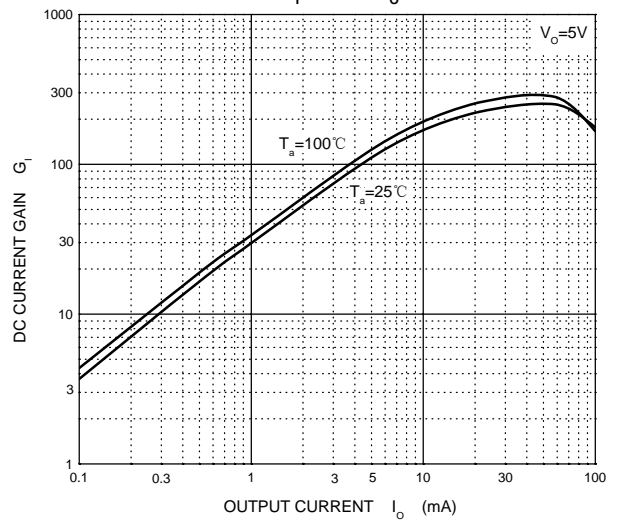
OFF Characteristics



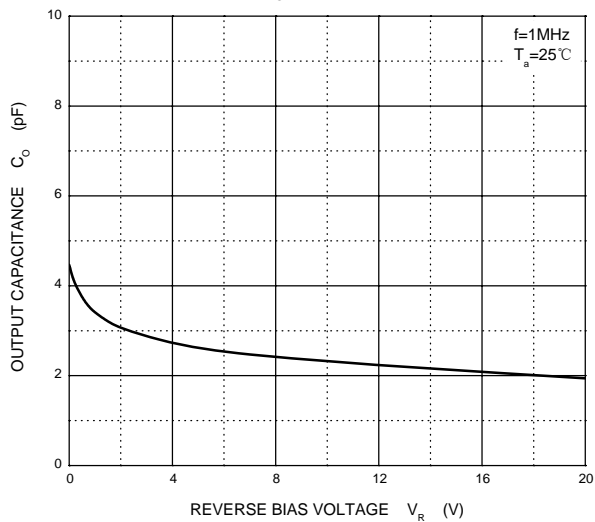
$V_{o(ON)}$ — I_o



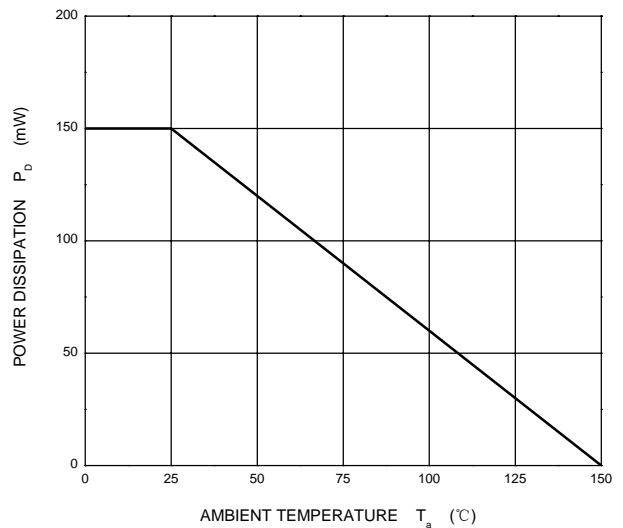
G_i — I_o



C_o — V_R

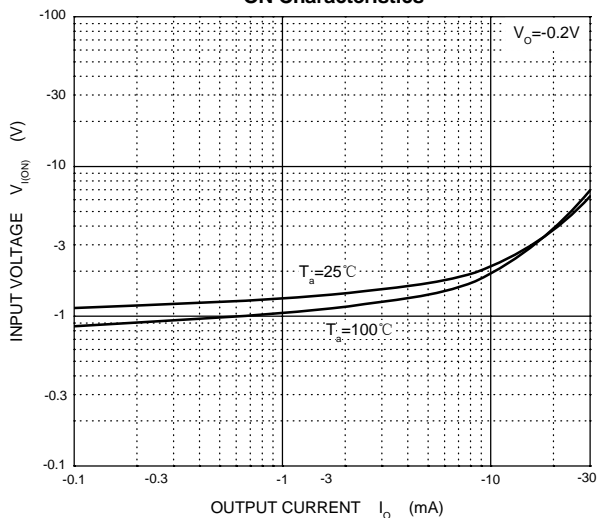


P_D — T_a

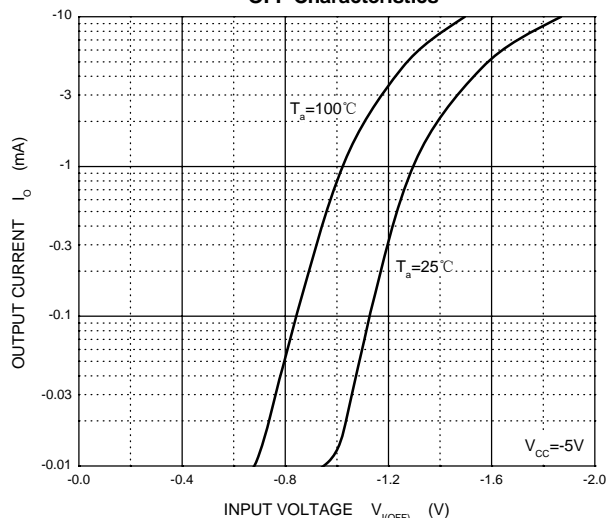




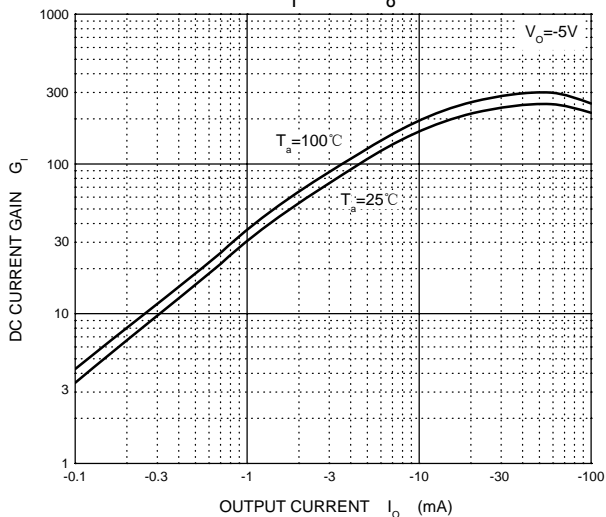
ON Characteristics



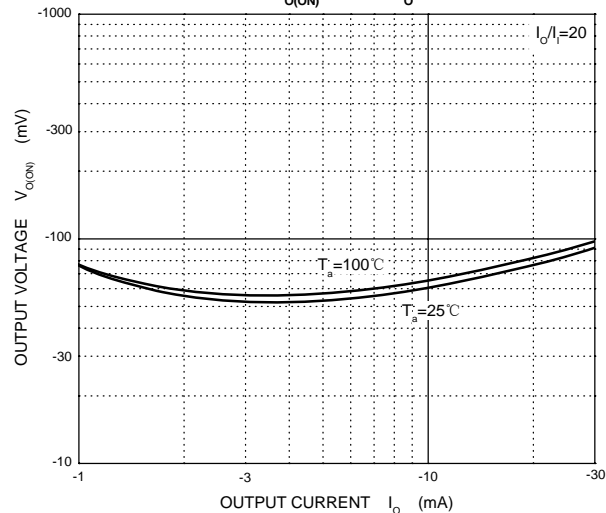
OFF Characteristics



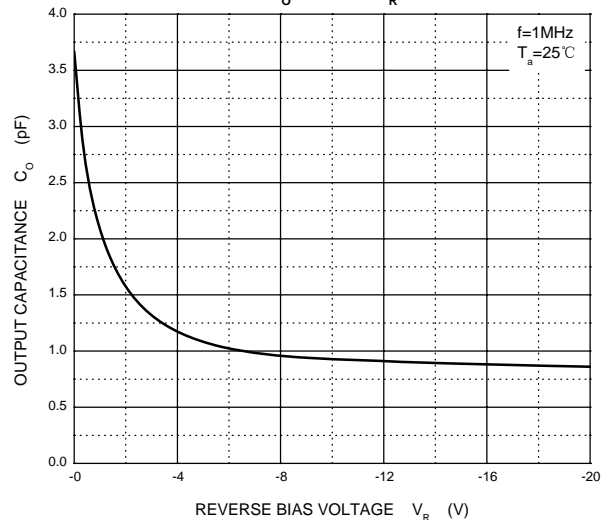
$G_i - I_o$



$V_{o(ON)} - I_o$



$C_o - V_R$



$P_D - T_a$

