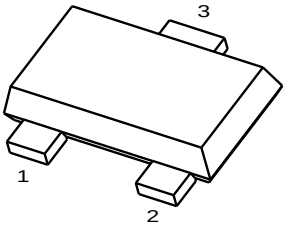
DTC706EM

Features

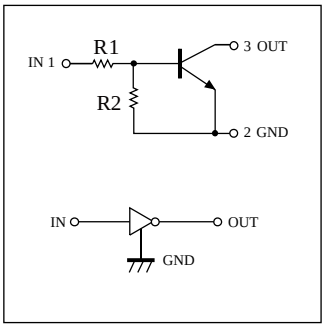
- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors(see equivalent circuit)
- The bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input.They also have the advantage of almost completely eliminating parasitic effects
- Only the on/off conditions need to be set for operation, making device design easy



SOT-723

INFORMATION

Part Number	MARKING	Package
DTC706EM	E23	SOT- 723



● MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

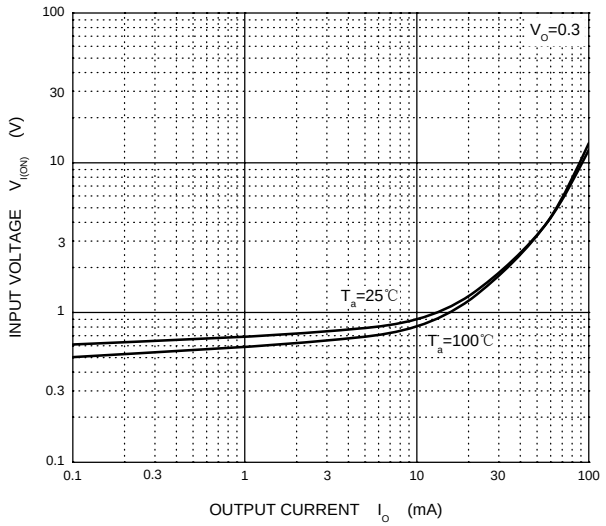
Symbol	Parameter	Limits	Unit
V_{CC}	Supply Voltage	50	V
V_{IN}	Input Voltage	-5～+30	V
I_O	Output Current	100	mA
P_D	Power Dissipation	100	
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55～+150	℃

● ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

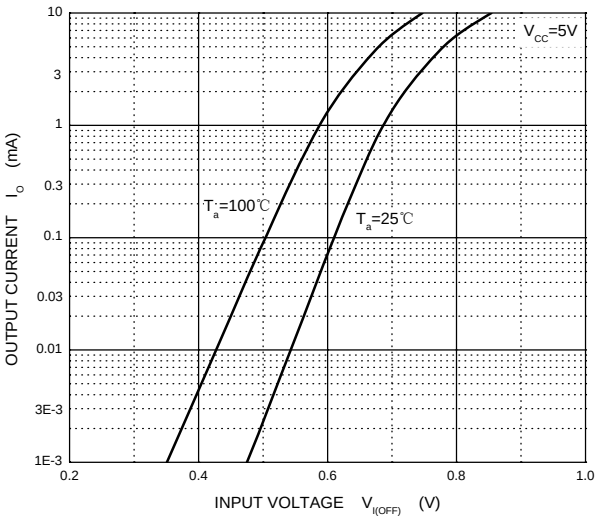
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Input voltage	$V_{I(off)}$	V_{CC}=5V,I_O=100μA	0.5			V
	$V_{I(on)}$	V_O=0.3V ,I_O=5mA			1.3	V
Output voltage	$V_{O(on)}$	I_O/I_I=5mA/0.25mA		0.1	0.3	V
Input current	I_I	V_I=5V			1.8	mA
Output current	$I_{O(off)}$	V_{CC}=50V,V_I=0			0.5	μA
DC current gain	G_I	V_O=5V,I_O=10mA	80			
Input resistance	R_1		3.29	4.7	6.11	kΩ
Resistance ratio	R_2/R_1		8	10	12	
Transition frequency	f_T	V_O=10V ,I_O=5mA,f=100MHz		250		MHz

Typical Performance Characteristics

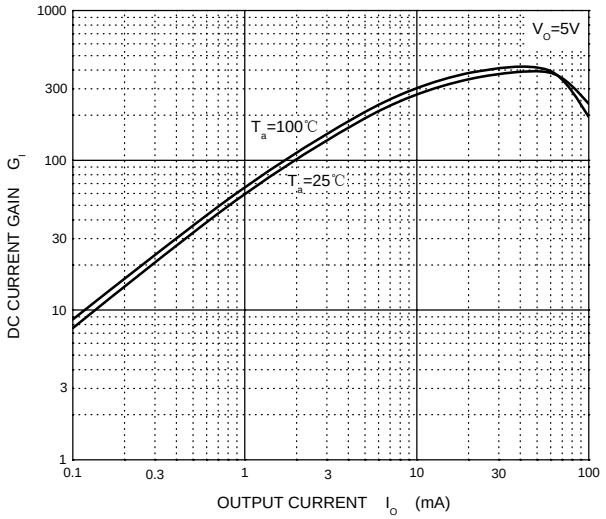
ON Characteristics



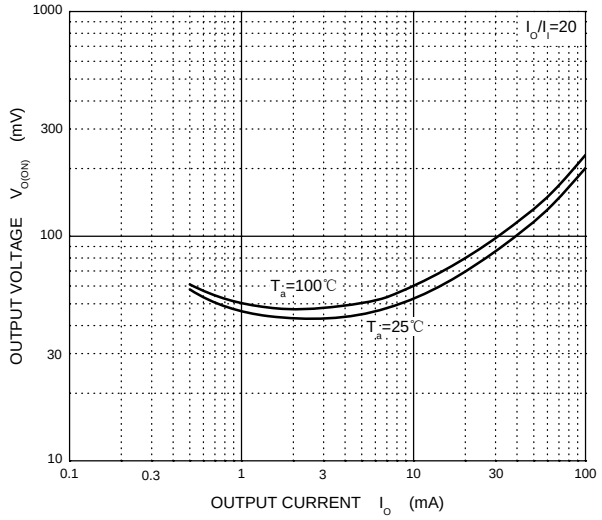
OFF Characteristics



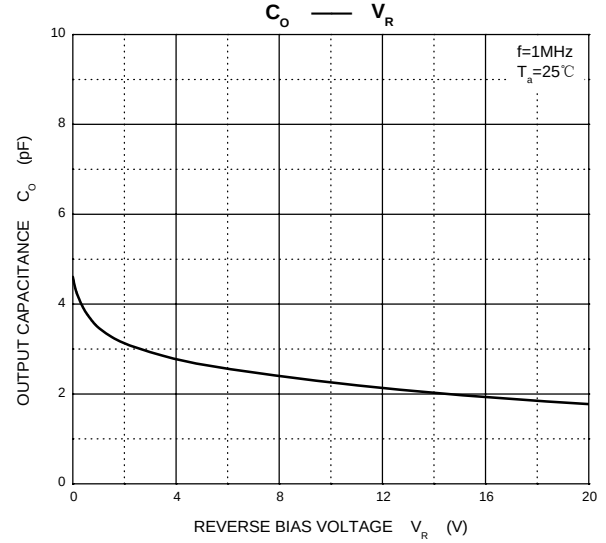
G_I —— I_O



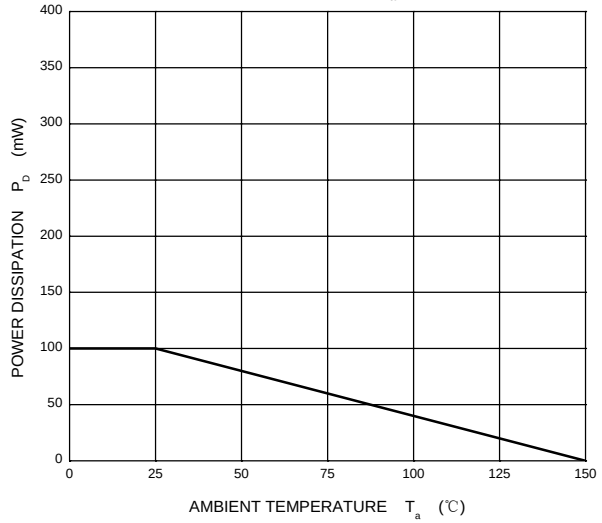
$V_{O(ON)}$ —— I_O



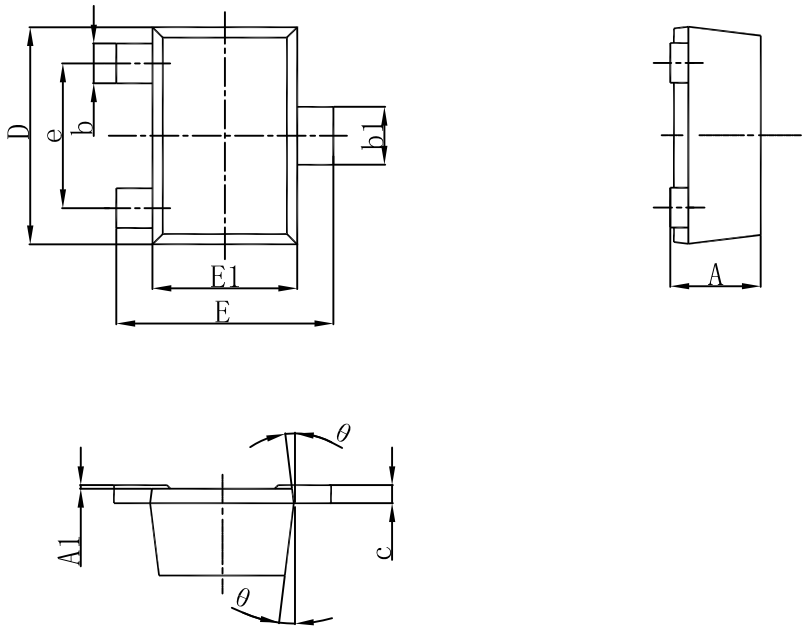
C_O —— V_R

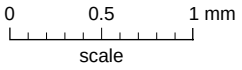


P_D —— T_a



■ **SOT- 723**





DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1 max	b	b1	c	D	E	E1
mm	0.43 0.50	0.05	0.17 0.27	0.27 0.37	0.08 0.15	1.15 1 25	0.15 0.25	0.75 0.85