



WBFBP-03B Plastic-Encapsulate Transistors

TSC143ENND03 TRANSISTOR

DESCRIPTION

NPN Digital Transistor

FEATURES

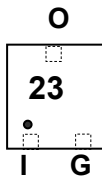
- 1) Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors (see equivalent circuit)
- 2) The bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input. They also have the advantage of almost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

APPLICATION

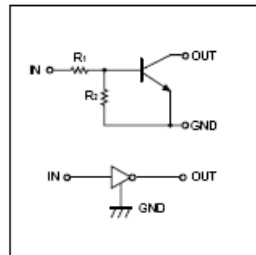
NPN Digital Transistor

For portable equipment:(i.e. Mobile phone,MP3, MD,CD-ROM, DVD-ROM, Note book PC, etc.)

MARKING: 23



equivalent circuit



Aaximum ratings(Ta=25°C)

Parameter	Symbol	Value	Unit
Supply voltage	V_{CC}	50	V
Input voltage	V_{IN}	-10~+30	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

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		$V_O=0.3V, I_O=20mA$
Output voltage	$V_{O(on)}$			0.3	V	$I_O/I_I=10mA/0.5mA$
Input current	I_I			1.8	mA	$V_I=5V$
Output current	$I_{O(off)}$			0.5	μA	$V_{CC}=50V, V_I=0$
DC current gain	G_I	30				$V_O=5V, I_O=10mA$
Input resistance	R_1	3.29	4.7	6.11	K Ω	
Resistance ratio	R_2/R_1	0.8	1	1.2		
Transition frequency	f_T		250		MHz	$V_{CE}=10V, I_E=-5mA, f=100MHz$

