



WBFBP-03B Plastic-Encapsulate Transistors

TSC123JNND03 TRANSISTOR

DESCRIPTION

NPN Digital Transistor

FEATURES

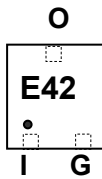
- 1) Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors (see equivalent circuit)
- 2) The bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input. They also have the advantage of almost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

APPLICATION

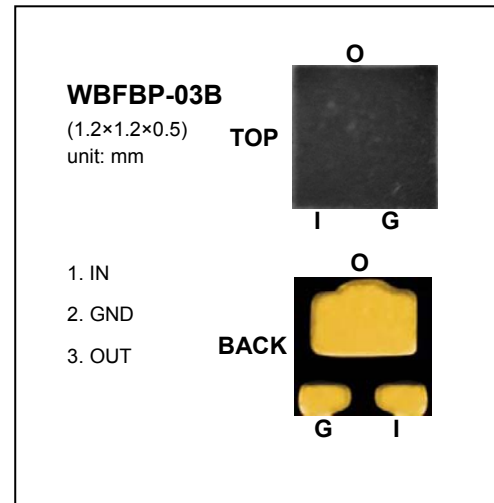
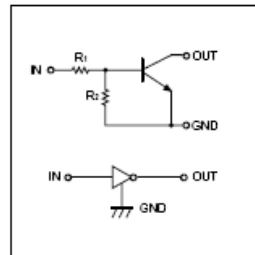
NPN Digital Transistor

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

MARKING: E42



equivalent circuit



Absolute maximum ratings(Ta=25°C)

Parameter	Symbol	Value	Units
Supply voltage	V _{CC}	50	V
Input voltage	V _{IN}	-5~12	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 =100μA
	V _{I(on)}			1.1		V _O =0.3V, I _O =5 mA
Output voltage	V _{O(on)}		0.1	0.3	V	I _O /I _I =5mA/0.25mA
Input current	I _I			3.6	mA	V _I =5V
Output current	I _{O(off)}			0.5	μA	V _{CC} =50V, V _I =0
DC current gain	G _I	80				V _O =5V, I _O =10mA
Input resistance	R ₁	1.54	2.2	2.86	KΩ	-
Resistance ratio	R ₂ /R ₁	17	21	26		-
Transition frequency	f _T		250		MHZ	V _{CE} =10V, I _E =-5mA, f=100MHZ