-100mA / -50V Digital transistors (with built-in resistors)

DTA143XEB

●Applications
Inverter, Interface, Driver

●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 the device design easy.

●Structure
PNP silicon epitaxial planar transistor type
(Resistor built-in)

●Packaging specifications

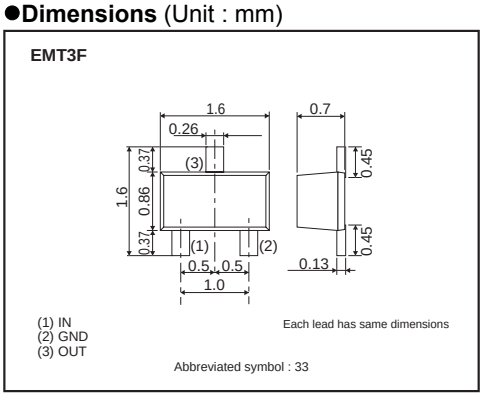
	Package	EMT3F
	Packaging type	Taping
	Code	TL
Part No.	Basic ordering unit (pieces)	3000
DTA143XEB		○

●Absolute maximum ratings (Ta=25°C)

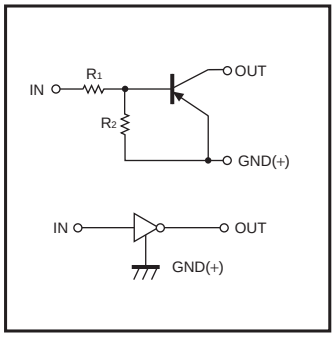
Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	−50	V
Input voltage	V_{IN}	−20 to +7	V
Collector current	Ic(max) *1	−100	mA
Output current	Io	−100	mA
Power dissipation	P_D *2	150	mW
Junction temperature	Tj	150	°C
Range of storage temperature	Tstg	−55 to +150	°C

*1 Characteristics of built-in transistor
*2 Each terminal mounted on a recommended land

●Dimensions (Unit : mm)



●Inner circuit



R1=4.7kΩ, R2=10kΩ

●Electrical characteristic curves

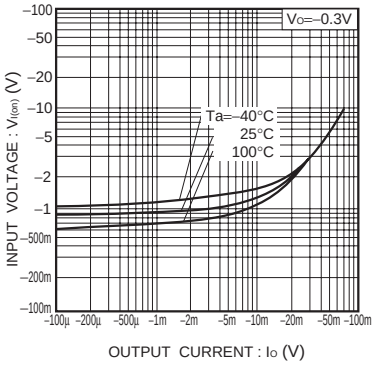


Fig.1 Input voltage vs. output current (ON characteristics)

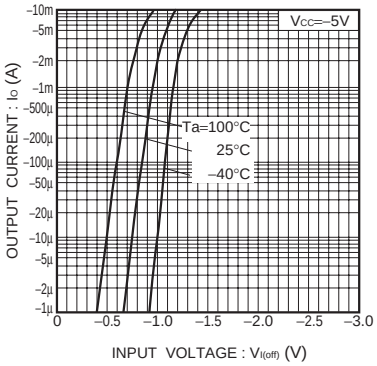


Fig.2 Output current vs. input voltage (OFF characteristics)

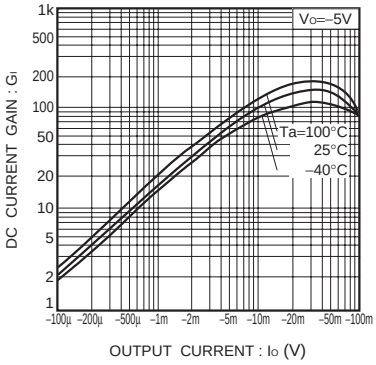


Fig.3 DC current gain vs. output current

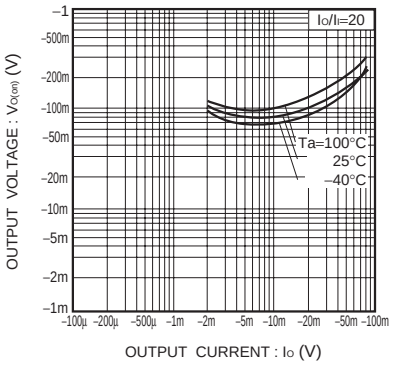


Fig.4 Output voltage vs. output current

Notes

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