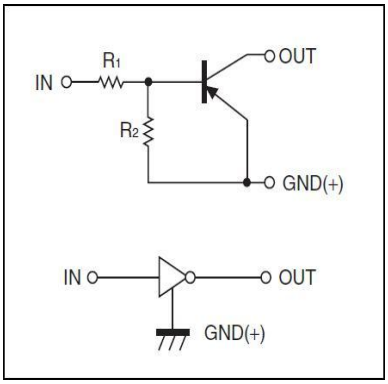
RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

DTA115ES5

DIGITAL TRANSISTOR (PNP)

Digital Transistors (BRT) R1 = 100 kΩ, R2 = 100 kΩ

Equivalent Circuit



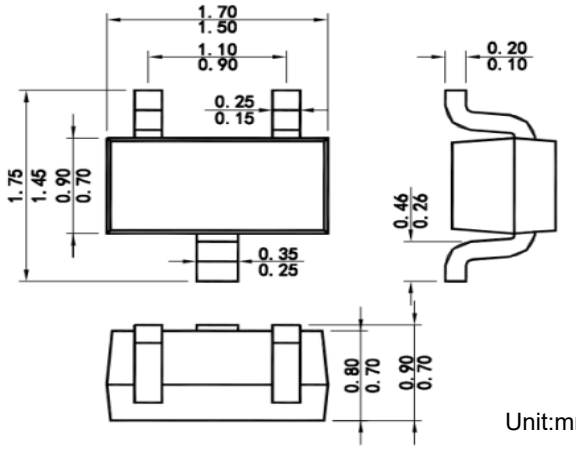
FEATURES

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-filmresistors with complete isolation to allow negative biasing of the input. They also have the advantage of almost completely eliminating parasitic effects

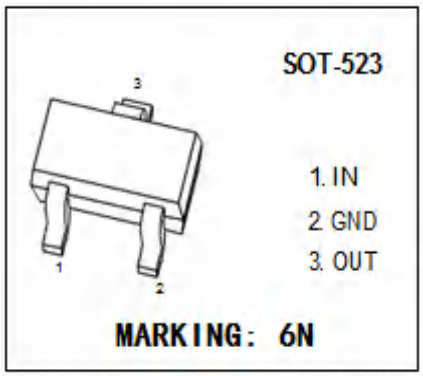
Only the on/off conditions need to be set for operation making device design easy

PACKAGE DIMENSIONS



Unit:mm

PIN CONNENCTIONS and MARKING



MAXIMUM RATINGS(Ta=25 ℃ unless otherwise noted)

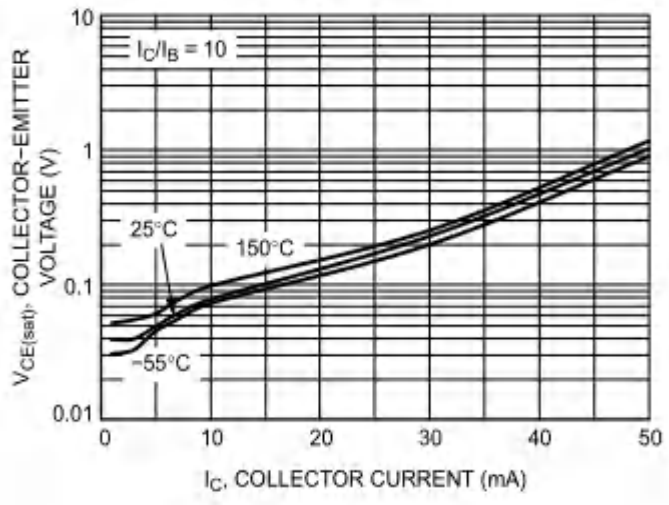
Rating	Symbol	Max	Unit
Collector−Base Voltage	V(BR)CBO	50	Vdc
Collector−Emitter Voltage	V(BR)CEO	50	Vdc
Collector Current − Continuous	IC	100	mAdc
Input Forward Voltage	VIN(fwd)	40	Vdc
Input Reverse Voltage	VIN(rev)	10	Vdc
Junction and Storage Temperature Range	TJ, Tstg	-55~150	℃

2024-04/17
REV:O

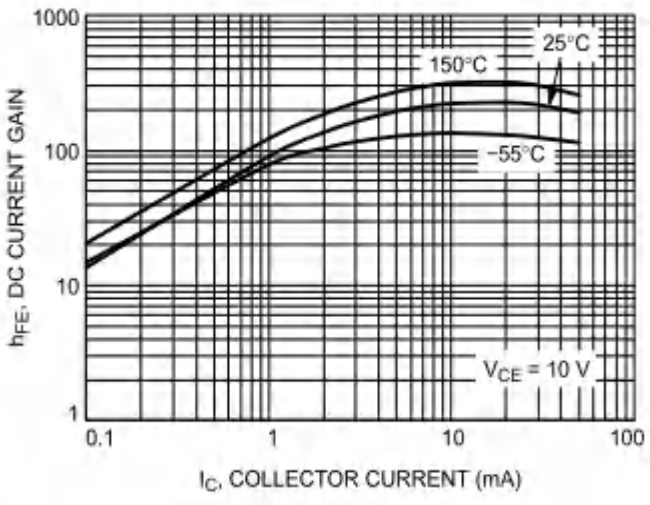
ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit
Collector−Base Cutoff Current (VCB = 50 V, IE = 0)	ICBO	−	−	100	nAdc
Collector−Emitter Cutoff Current (VCE = 50 V, IB = 0)	ICEO	−	−	500	nAdc
Emitter−Base Cutoff Current (VEB = 6.0 V, IC = 0)	IEBO	−	−	0.05	mAdc
Collector−Base Breakdown Voltage (IC = 10 μA, IE = 0)	V(BR)CBO	50	−	−	Vdc
Collector−Emitter Breakdown Voltage (IC = 2.0 mA, IB = 0)	V(BR)CEO	50	−	−	Vdc
DC Current Gain (IC=5mA, VCE=10V)	hFE	80	150	−	
Collector−Emitter Saturation Voltage (IC=10mA, IB=0.3mA)	VCE(sat)	−	−	0.25	Vdc
Input Voltage (off)(VCE = 5.0 V, IC = 100 μA)	Vi(off)	−	1.2	0.5	Vdc
Input Voltage (on)(VCE = 0.3 V, IC = 1 mA)	Vi(on)	3	1.6	−	Vdc
Output Voltage (on)(VCC=5.0V, VB=5.5V, RL=1.0 kQ)	VOL	−	−	0.2	Vdc
Output Voltage (off)(VCC=5.0V, VB=0.5V, RL=1.0 kQ)	VOH	4.9	−	−	Vdc
Input Resistor	R1	70	100	130	kΩ
Resistor Ratio	R1/R2	0.8	1	1.2	

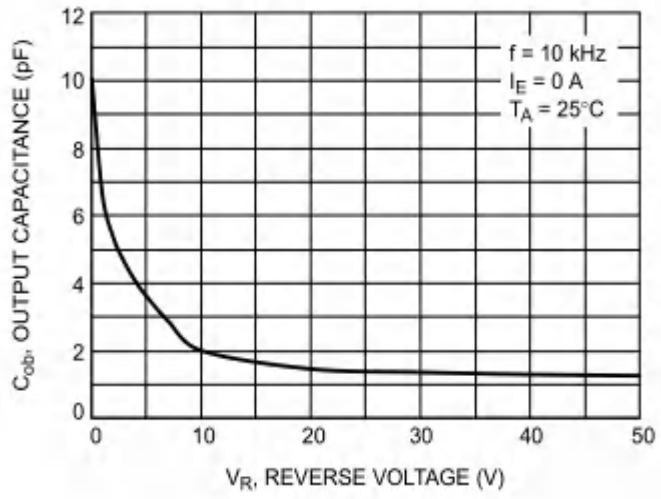
RATING AND CHARACTERISTICS CURVES (DTA115ES5)



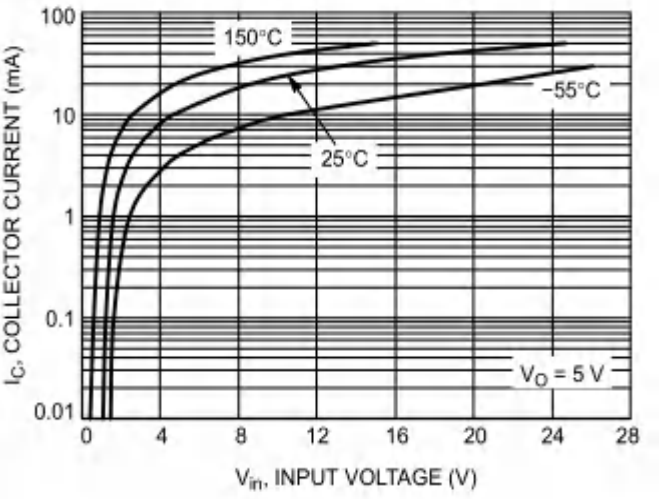
VCE(sat) vs. IC



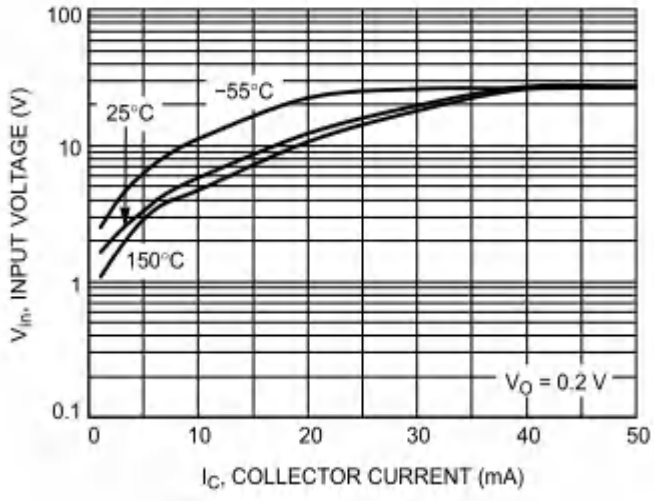
DC Current Gain



Output Capacitance



Output Current vs. Input Voltage



Input Voltage vs. Output Current

PACKAGING OF DIODE

PACKAGE	PACKAGE CODE	EA PER REEL	EA PER BOX	EA PER CARTON
SOT-523	-T	3,000	45,000	180,000

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