

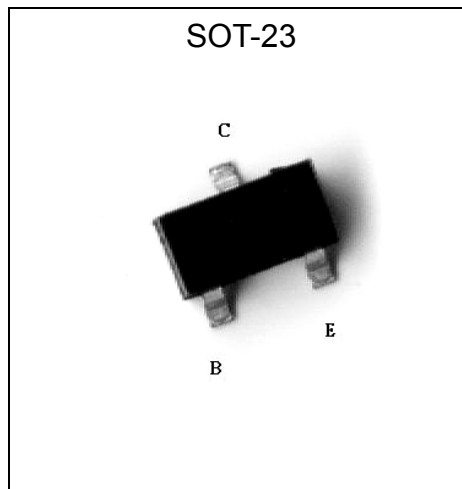
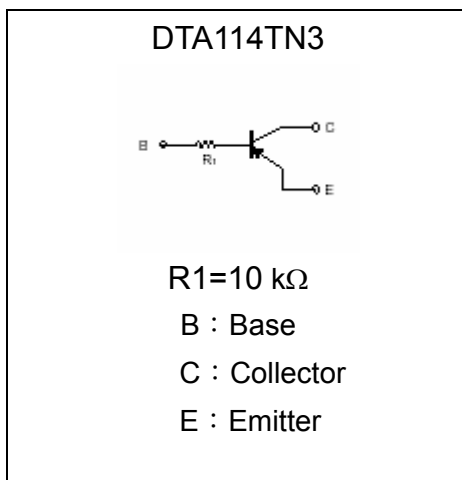
General Purpose PNP Digital Transistors (Built-in Resistor)

DTA114TN3

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.
- Complements the DTC114TN3

Equivalent Circuit



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	VCBO	-50	V
Collector-Emitter Voltage	VCEO	-50	V
Emitter-Base Voltage	VEBO	-5	V
Collector Current	IC (Max)	-100	mA
Power Dissipation	Pd	200	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C



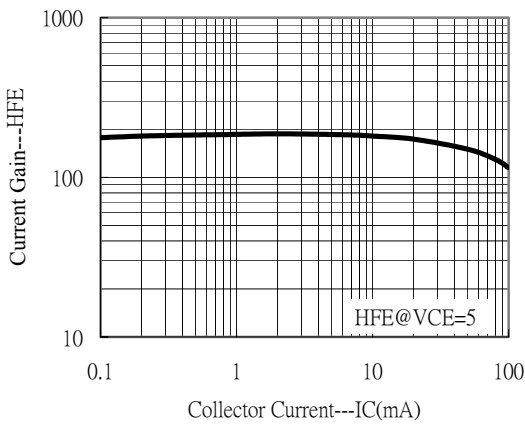
Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	VCBO	-50	-	-	V	IC=-50uA
Collector-Emitter Breakdown Voltage	VCEO	-50	-	-	V	IC=-1mA
Emitter-Base Breakdown Voltage	VEBO	-5	-	-	V	IE=-50uA
Collector-Base Cutoff Current	ICBO	-	-	-0.5	uA	VCB=-50V
Emitter-Base Cutoff Current	IEBO	-	-	-0.5	uA	VEB=-4V
Collector-Emitter Saturation Voltage	VCE(sat)	-	0.1	-0.3	V	IC=-10mA, IB=-1mA
DC Current Gain	hFE	100	-	600	-	VCE=-5V, IC=-1mA
Input Resistance	R	7	10	13	kΩ	-
Transition Frequency	fT	-	250	-	MHz	VCE=-10V, IE=-5mA, f=100MHz*

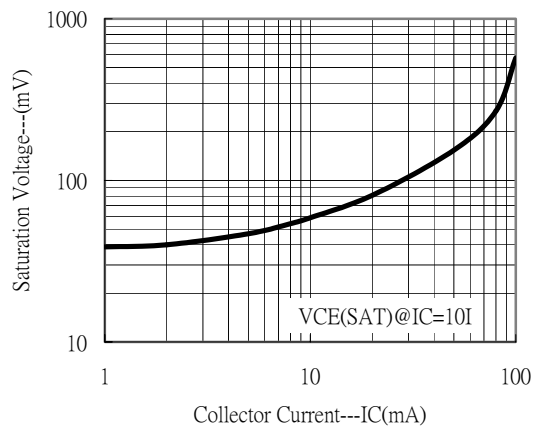
* Transition frequency of the device

Characteristic Curves

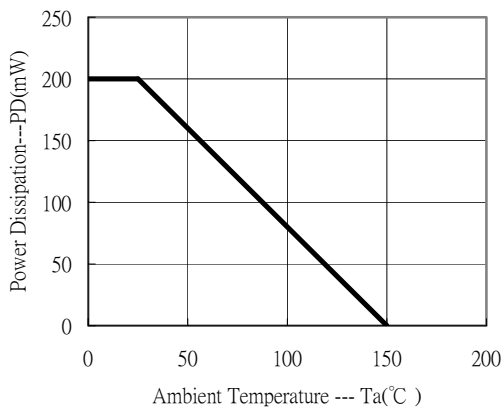
Current Gain vs Collector Current



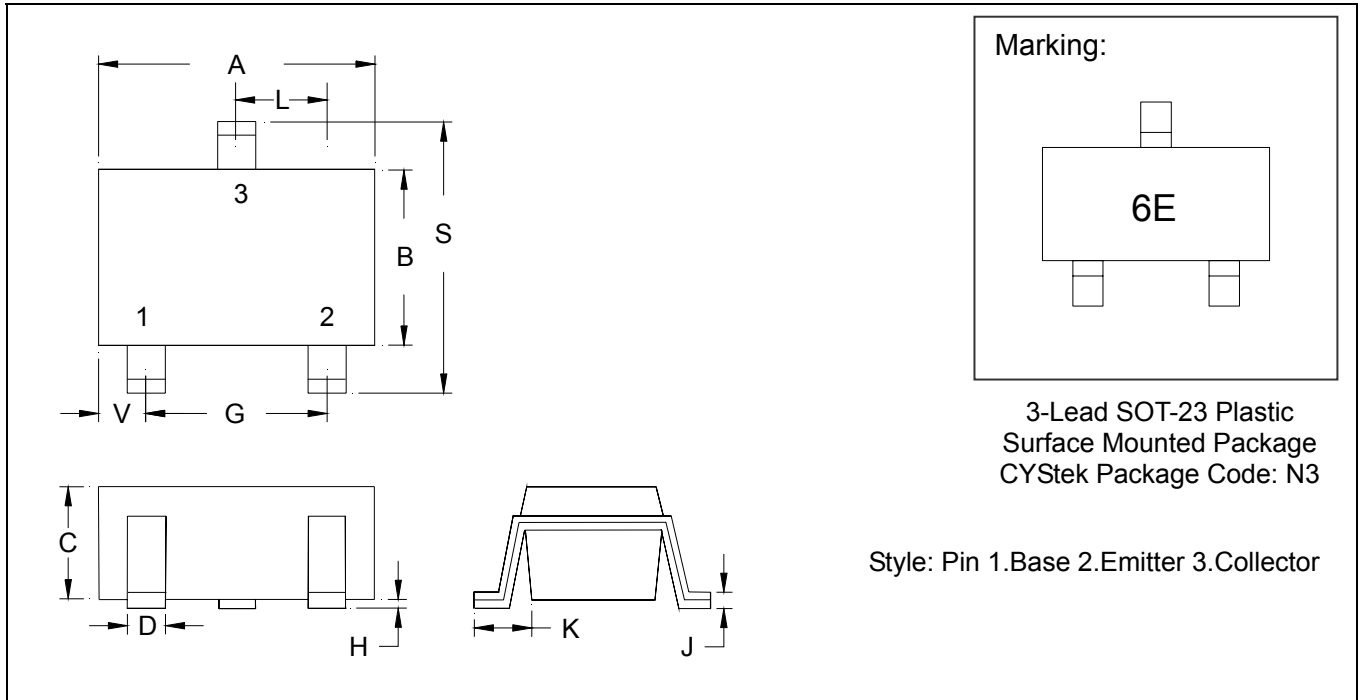
Saturation Voltage vs Collector Current



PD - Ta



SOT-23 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0034	0.0070	0.085	0.177
B	0.0472	0.0630	1.20	1.60	K	0.0128	0.0266	0.32	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1083	2.10	2.75
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0005	0.0040	0.013	0.10					

- Notes:**
- 1.Dimension and tolerance based on our Spec. dated Feb. 18,2002.
 - 2.Controlling dimension: millimeters.
 - 3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 - 4.If there is any question with packing specification or packing method, please contact your local CYCtek sales office.

Material:

- Lead: 42 Alloy; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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