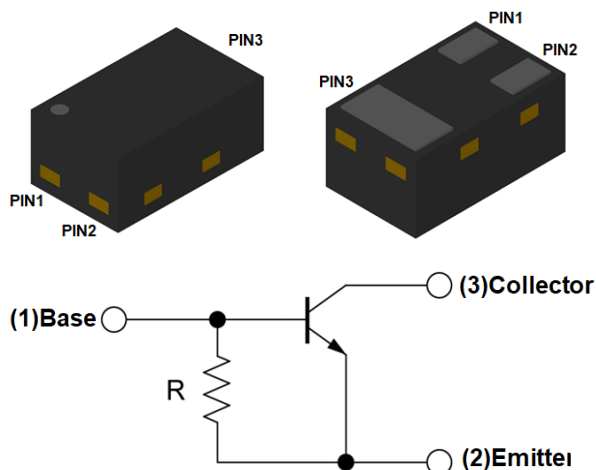


NPN Digital Transistor (Built-in Resistors)



Features

- Halogen free and RoHS compliant.
- Epoxy meets UL-94 V-0 flammability rating.
- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors.

Mechanical data

- **Package**: DFN1006-3L
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Value
Device marking code			H8
Collector-base voltage	V_{CBO}	V	50
Collector-emitter voltage	V_{CEO}	V	50
Emitter-base voltage	V_{EBO}	V	5
Power dissipation	P_D	mW	100
Operation junction temperature	T_J	$^{\circ}\text{C}$	-55 to +150
Storage temperature	T_{STG}	$^{\circ}\text{C}$	-55 to +150



DTC114GL3

RoHS
COMPLIANT

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

ITEM	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Collector-base voltage	V _{CBO}	V	I _C =50uA	50		
Collector-emitter voltage	V _{CEO}	V	I _C =1mA	50		
Emitter-base voltage	V _{EBO}	V	I _E =720uA	5		
Collector cut-off current	I _{CBO}	uA	V _{CB} =50V			0.5
Emitter cut-off current	I _{EBO}	mA	V _{EB} =4V			0.5
DC current gain	h _{FE}		V _{CE} =5V, I _C =5mA	30		
Input resistance	R	kΩ		7	10	13
Collector-emitter saturation voltage	V _{CE(sat)}	V	I _C =10mA, I _B =0.5mA			0.3
Transition frequency	f _T	MHz	V _{CE} =10V, I _E =-5mA, f=100MHz		250	

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽¹⁾	°C/W	833

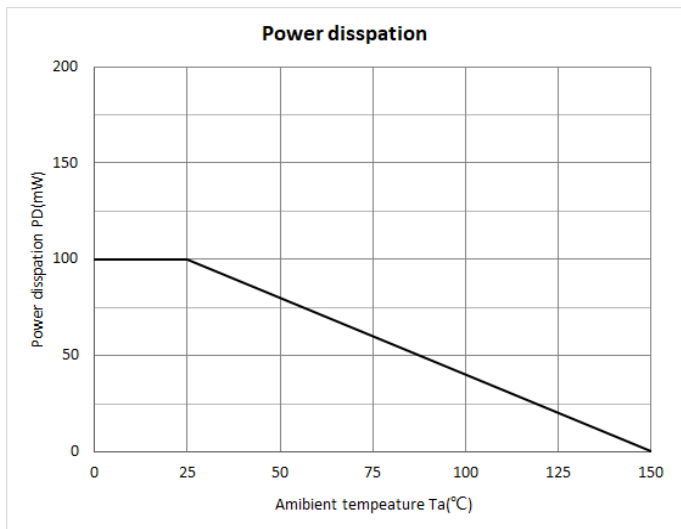
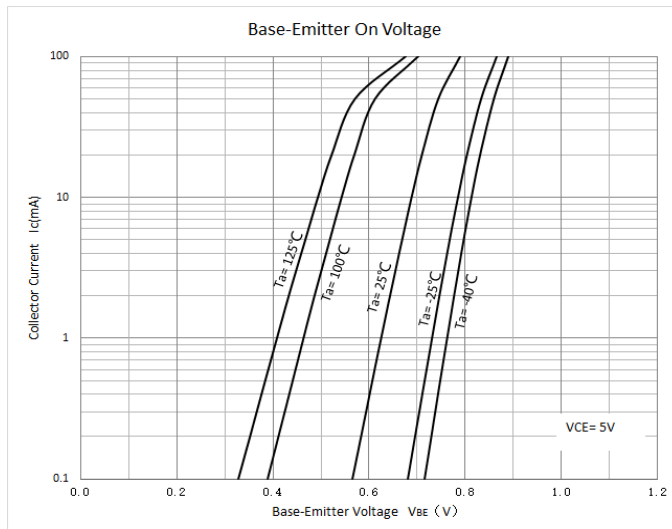
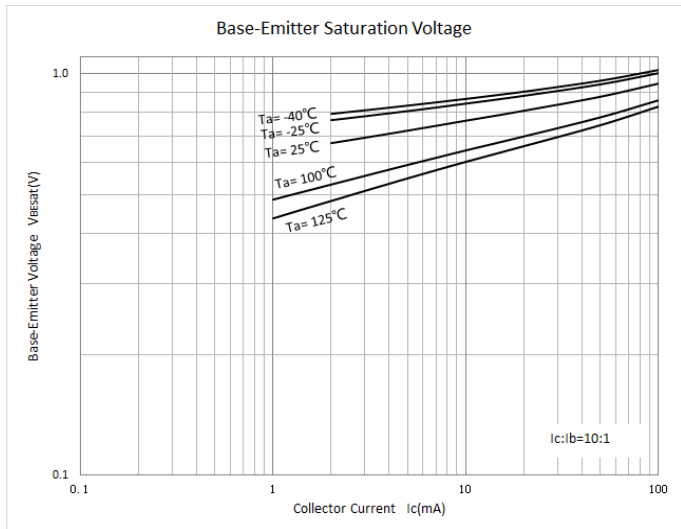
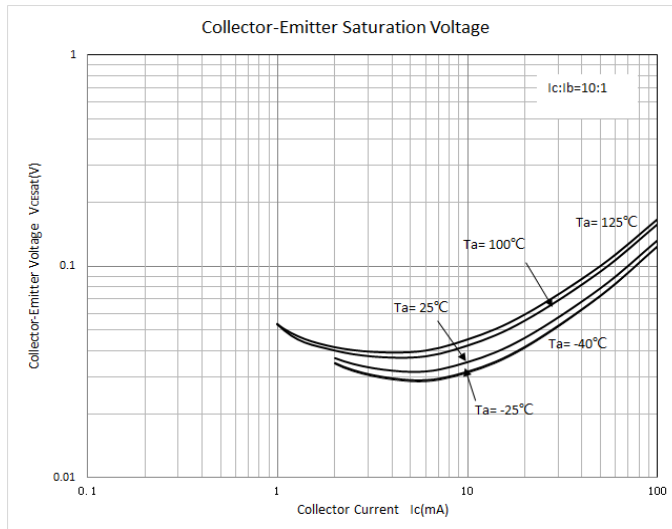
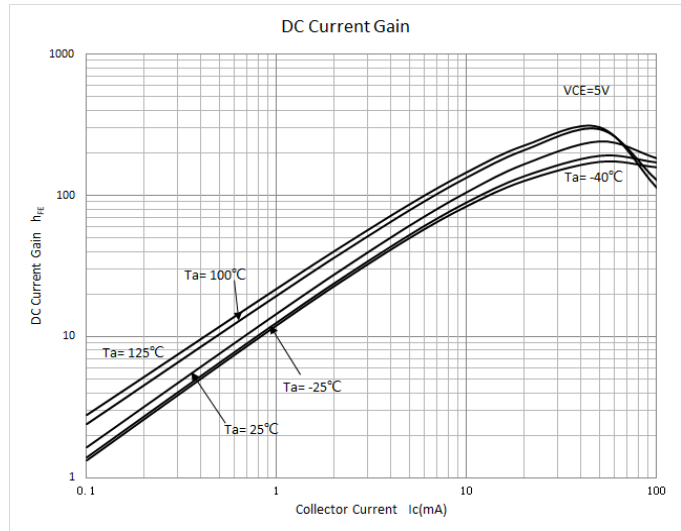
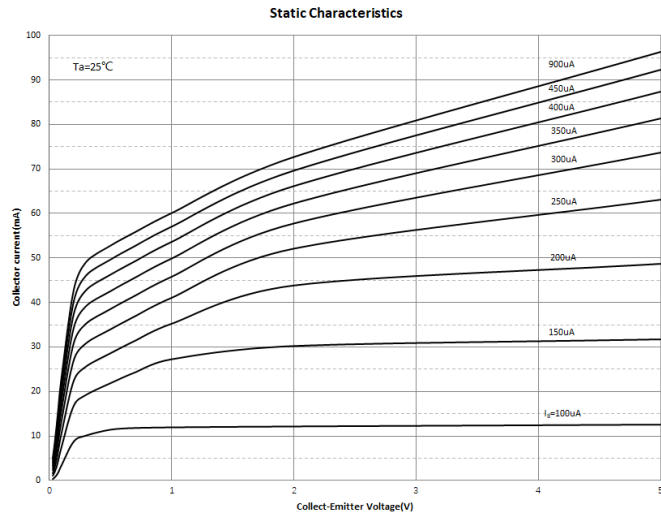
Note:1. Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated and standard footprint.

■ Ordering Information

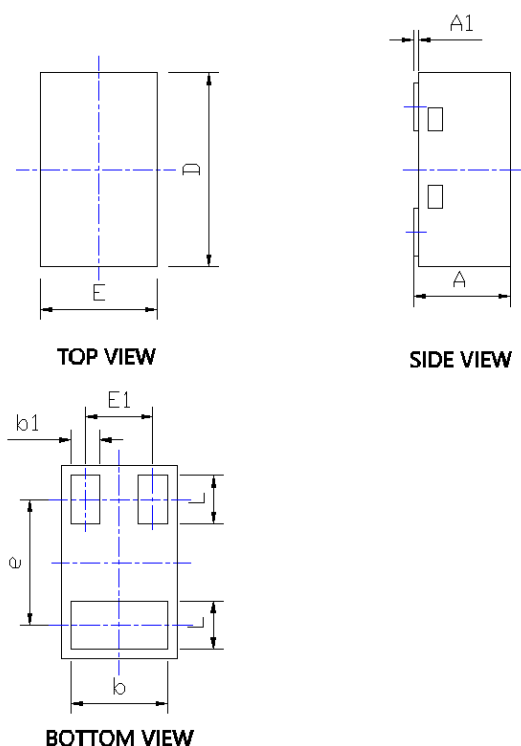
Preferred P/N	Packing code	Unit weight(mg)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
DTC114GL3	F1	Approximate 0.9	10000	100000	400000	Tape & Reel



■ Typical of Characteristics

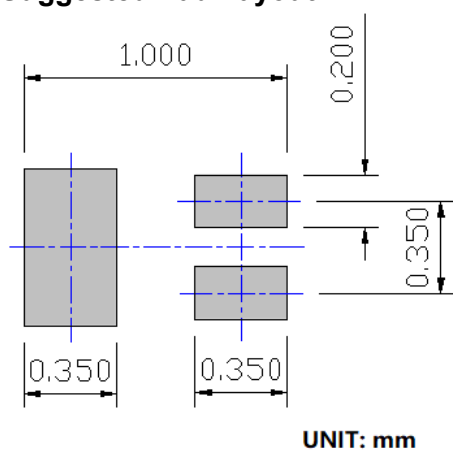


■ Outline Dimensions



DIMENSIONS			
SYMBOL	Millimeter		
	MIN.	NOM.	MAX.
A	0.42	---	0.55
A1	0.025REF		
b	0.45	0.50	0.55
b1	0.10	0.15	0.20
D	0.95	1.00	1.05
E	0.55	0.60	0.65
E1	0.35BSC		
e	0.65BSC		
L	0.20	0.25	0.30

■ Suggested Pad Layout





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