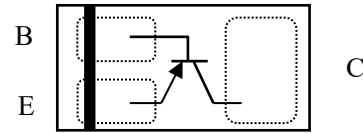


**Feature**

This device is Pb-Free, Halogen Free/BFR Free and RoHS compliant.

- Package: DFN1006-3L
- Emitter -Base Breakdown Voltage 5V
- High DC current gain typical 380
- Low Saturation Voltage 200mV
- 100mA continuous collector current
- PNP switch transistor



Top View

**Mechanical Characteristics**

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260°C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 um
- Pin flatness : ≤3mil

**Electrical characteristics per line@25°C( unless otherwise specified)**

Parameter		Symbol	Value	Units
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	-40	V
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	-50	V
Emitter -Base Breakdown Voltage		$V_{(BR)EBO}$	-5	V
Collector Current		$I_C$	-100	mA
Peak Collector Current		$I_{CM}$	-200	mA
Peak Base Current		$I_{BM}$	-100	mA
Maximum Power Dissipation (Note 1)(Note 4)	TA=25°C	$P_D$	270	mW
	TA=70°C		170	
Maximum Power Dissipation (Note 2)(Note 4)	TA=25°C	$P_D$	240	
	TA=70°C		150	
Storage Temperature		$T_{stg}$	-65~150	°C
Max. Operating Junction Temperature		$T_j$	150	°C

## Thermal resistance

Parameter	Symbol	Min.	Typ.	Max.	Units
Junction-to-Ambient Thermal Resistance (Note 1)	$R_{\theta JA}$		395	460	°C/W
Junction-to-Ambient Thermal Resistance (Note 2)	$R_{\theta JA}$		450	515	

## Absolute maximum rating@25°C

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Collector-Base Breakdown Voltage	$BV_{CBO}$		-50			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$		-40			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$		-5			V
Collector Cut-off Current ( $I_E=0$ )	$I_{CBO}$	$V_{CB}=-30V$			-0.1	$\mu A$
Emitter Cut-off Current ( $I_C=0$ )	$I_{EBO}$	$V_{EB}=-4V$			-0.1	$\mu A$
DC Current Gain	$h_{FE}$	$I_C=-1mA, V_{CE}=-6V$	200		500	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-50mA, I_B=-5mA$	-		-200	mV
Transition frequency	$f_T$	$V_{CE}=-12V, I_E=-2mA, f=100MHz$	100			MHz
Output Capacitance	$C_{ob}$	$V_{CB}=-12V, I_E=0mA, f=1MHz$			2.2	pF

## Note:

1. Surface mounted on FR4 Board using 1 square inch pad size, 1oz copper
2. Surface mounted on FR4 board using minimum pad size, 1oz copper
3. Pulse width < 380 $\mu s$ , Single pulse
4. Maximum junction temperature  $T_J=150^\circ C$ .
5. Pulse test: Pulse width < 380 us duty cycle < 2%.

Typical Characteristics

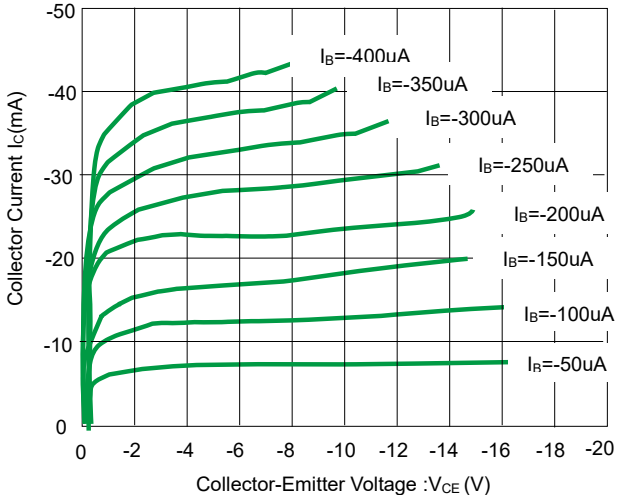


Figure1.Static Characteristic

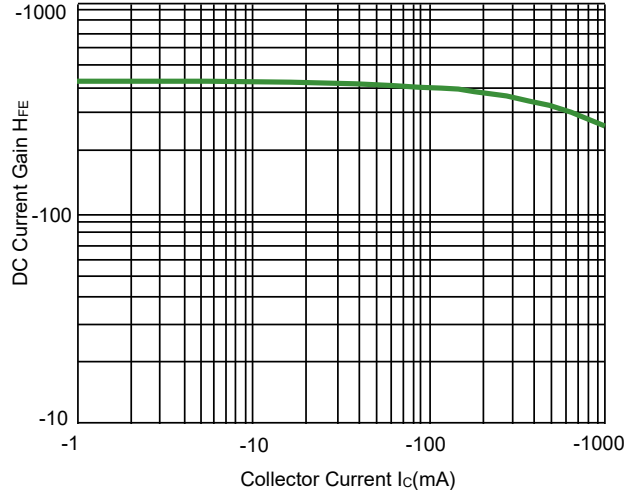


Figure2.DC Current Gain

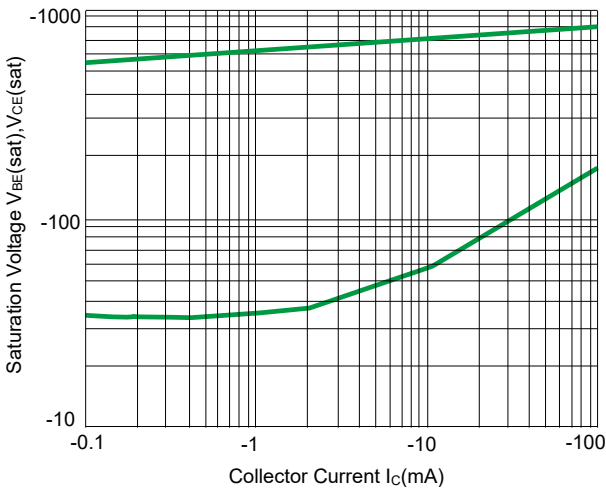


Figure3.Base-Emitter Saturation Voltage

Collector-Emitter Saturation Voltage

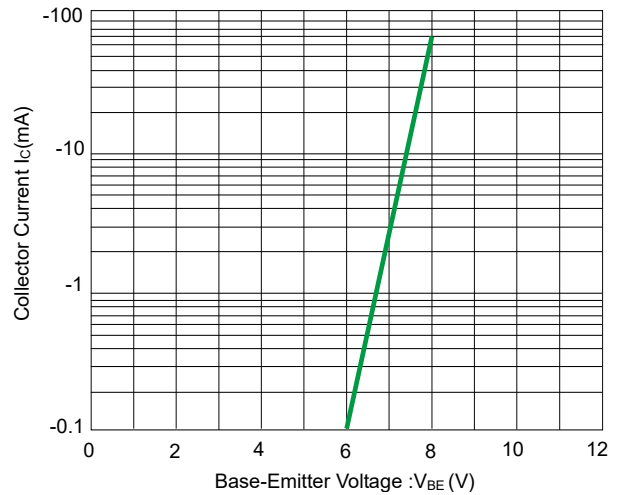


Figure4.Base-Emitter On Voltage

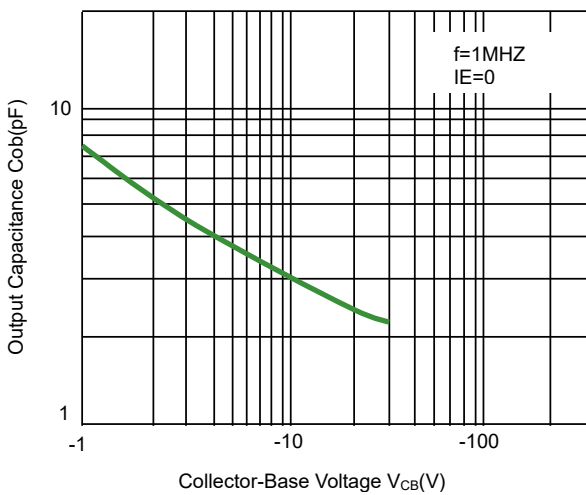


Figure5.Collector Output Capacitance

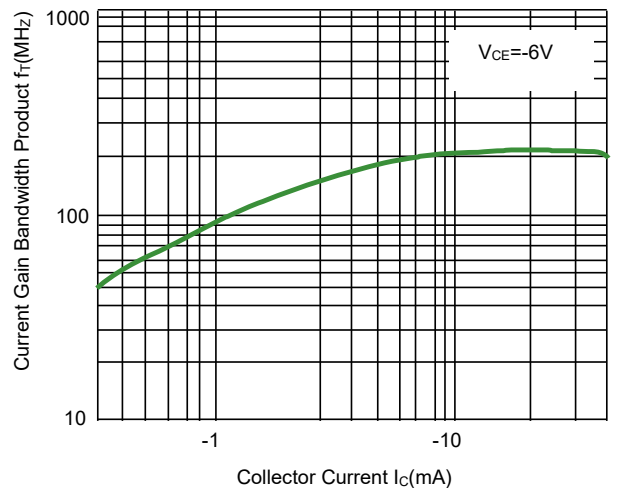
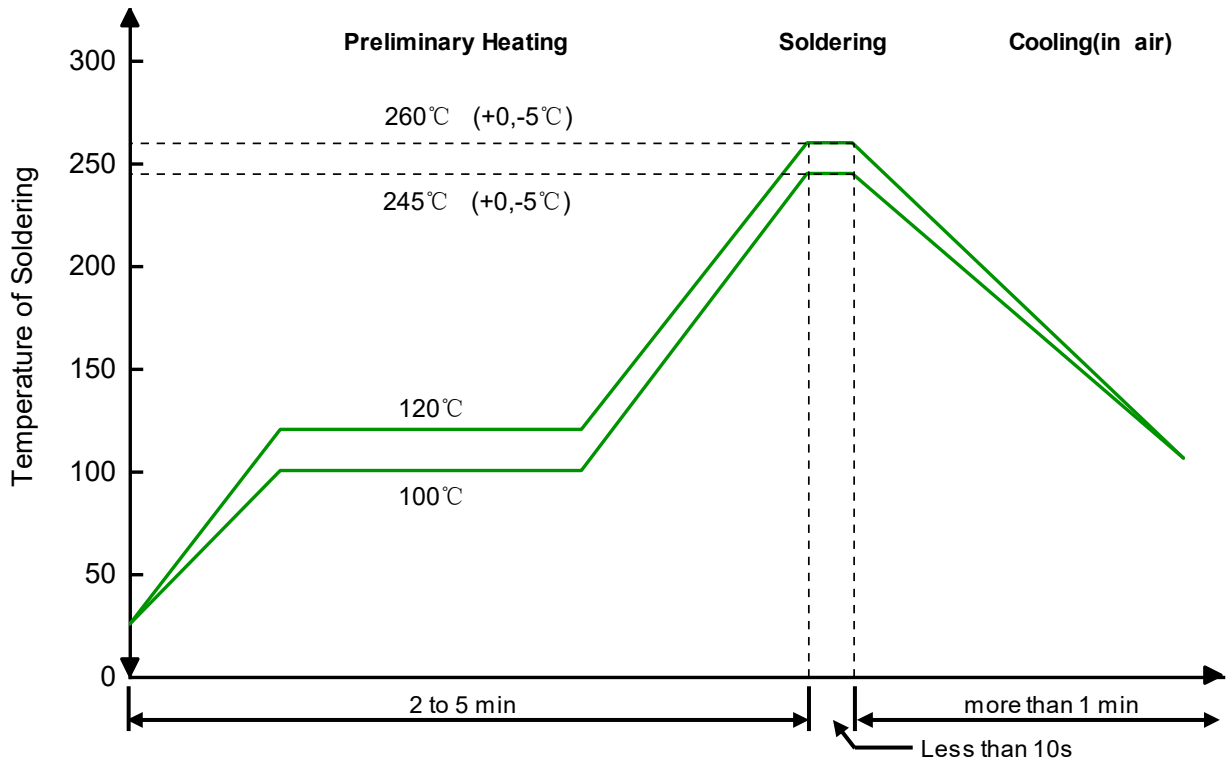


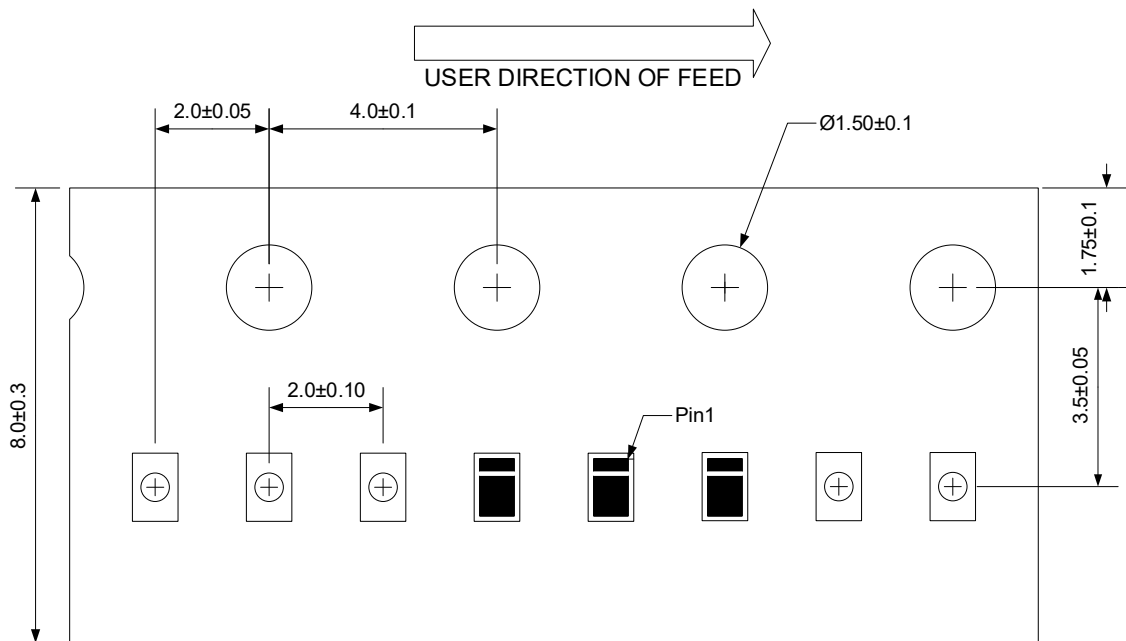
Figure6.Current Gain Bandwidth Product

Solder Reflow Recommendation



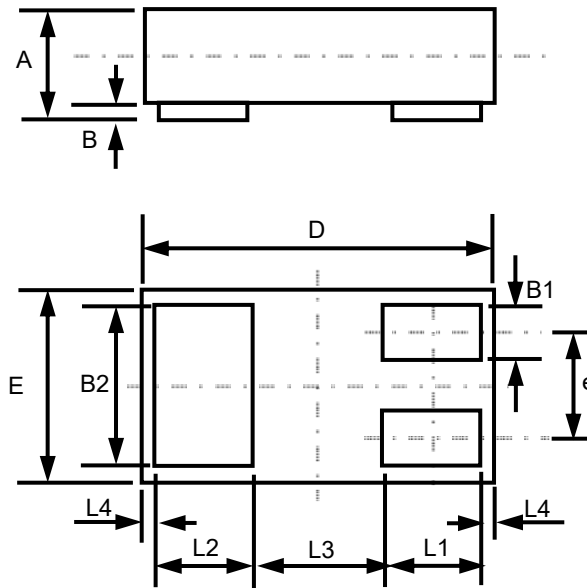
Remark: Pb free for 260°C; Pb for 245°C.

Load with information

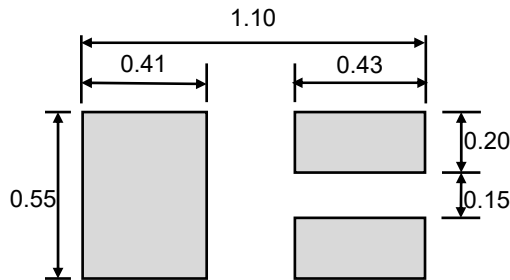


Unit:mm

Product dimension (DFN1006-3L)



Dim	Millimeters		
	MIN	Typ	MAX
A	0.33	0.47	0.498
B	0.00	0.03	0.05
B1	0.10	0.15	0.20
B2	0.45	0.50	0.55
D	0.85	1.00	1.15
E	0.45	0.60	0.75
e	--	0.35	--
L1	0.20	0.25	0.30
L2	0.20	0.25	0.30
L3	--	0.39	--
L4	--	0.05	--



Unit: mm

Suggested PCB Layout


Marking information



Ordering information

Device	Package	Reel	Shipping
PPT3FD503E0-2	DFN1006-3L (Pb-Free)	13"	40000 / Tape & Reel


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