Prisemi®

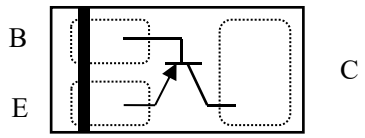
PPT3FD503E0-2

PNP general purpose transistor

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℃
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 um
- Pin flatness：≤3mil

Electrical characteristics per line@25℃(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)	Steady State	$R_{\theta JA}$		395	460	°C/W
Junction-to-Ambient Thermal Resistance (Note 2)	Steady State	$R_{\theta JA}$		450	515	

Absolute maximum rating@25℃

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	μA
Emitter Cut-off Current(I_C=0)	I_{EBO}	V_{EB}=-4V			-0.1	μA
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	Cob	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<380μs, Single pulse
4. Maximum junction temperature TJ=150°C.
5. Pulse test: Pulse width <380 us duty cycle <2%.

Typical Characteristics

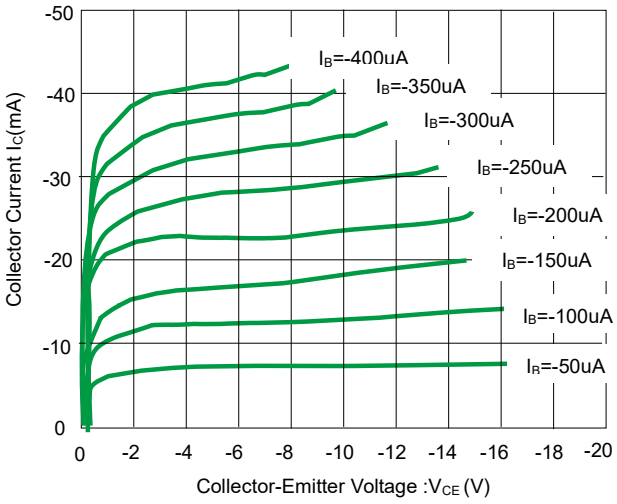


Figure1.Static Characteristic

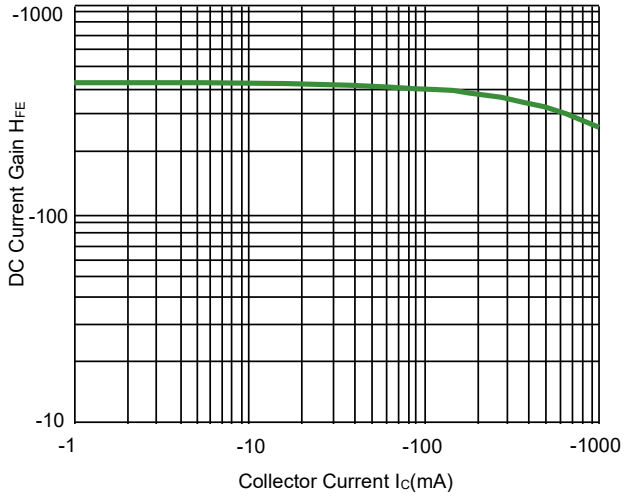


Figure2.DC Current Gain

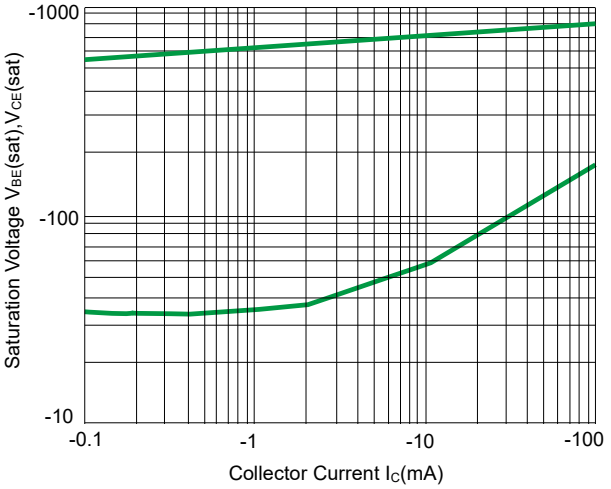


Figure3.Base-Emitter Saturation Voltage

Collector-Emitter Saturation Voltage

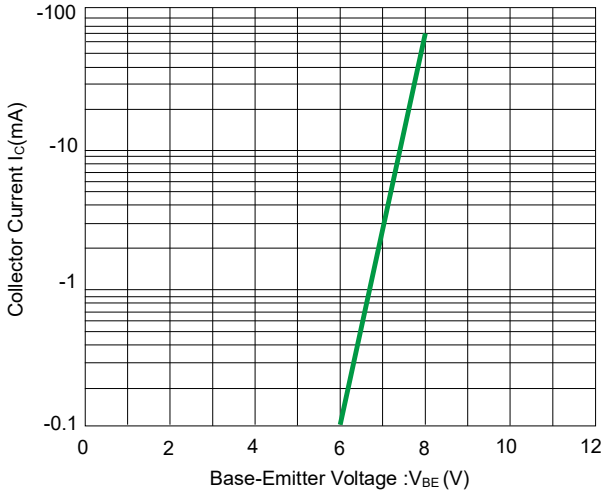


Figure4.Base-Emitter On Voltage

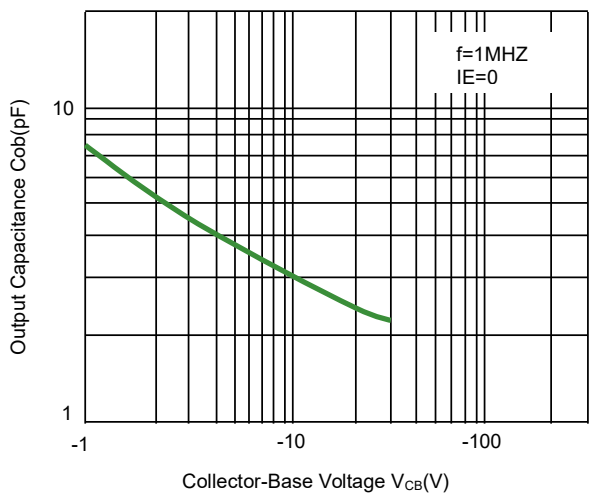


Figure5.Collector Output Capacitance

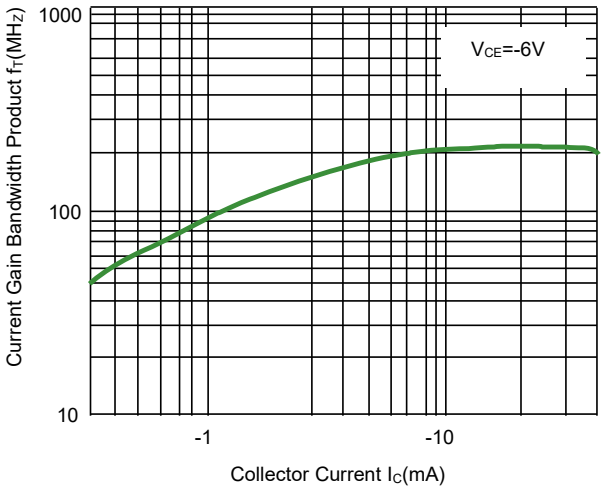
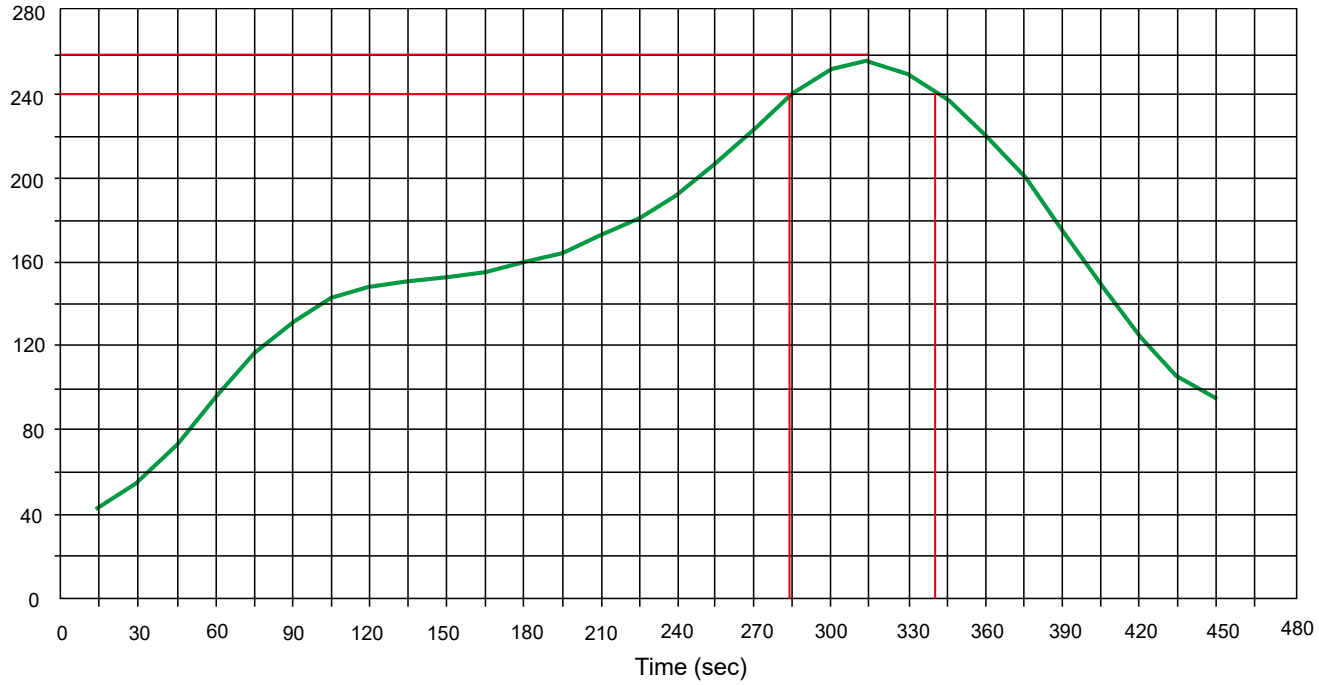


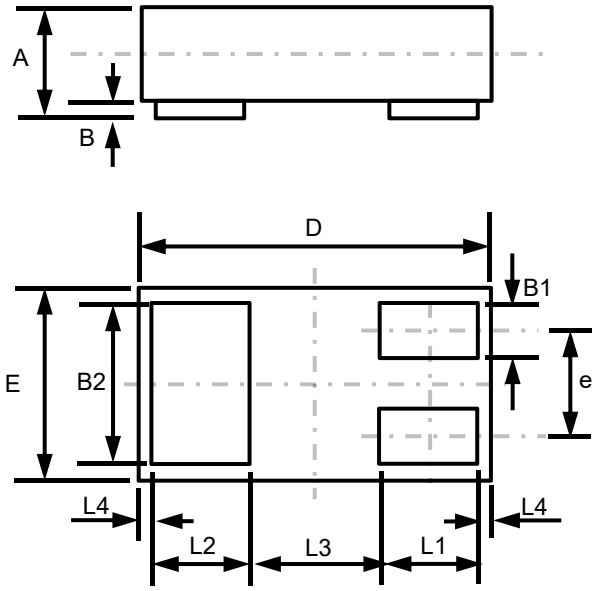
Figure6.Current Gian Bandwidth Product

Solder Reflow Recommendation

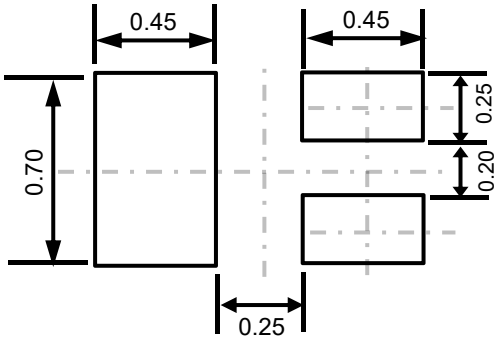
Peak Temp=257℃, Ramp Rate=0.802deg. ℃/sec



Product dimension (DFN1006-3L)



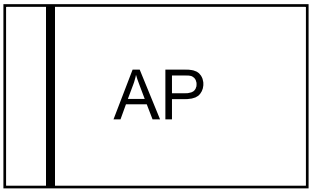
Dim	Millimeters		
	MIN	Typ	MAX
A	0.33	0.47	0.50
B	0.00	0.03	0.05
B1	0.10	0.15	0.20
B2	0.45	0.50	0.55
D	0.85	1.00	1.15
E	0.45	0.60	0.75
e	--	0.35	--
L1	0.20	0.25	0.30
L2	0.20	0.25	0.30
L3	--	0.39	--
L4	--	0.05	--



Unit:mm

Suggested PCB Layout

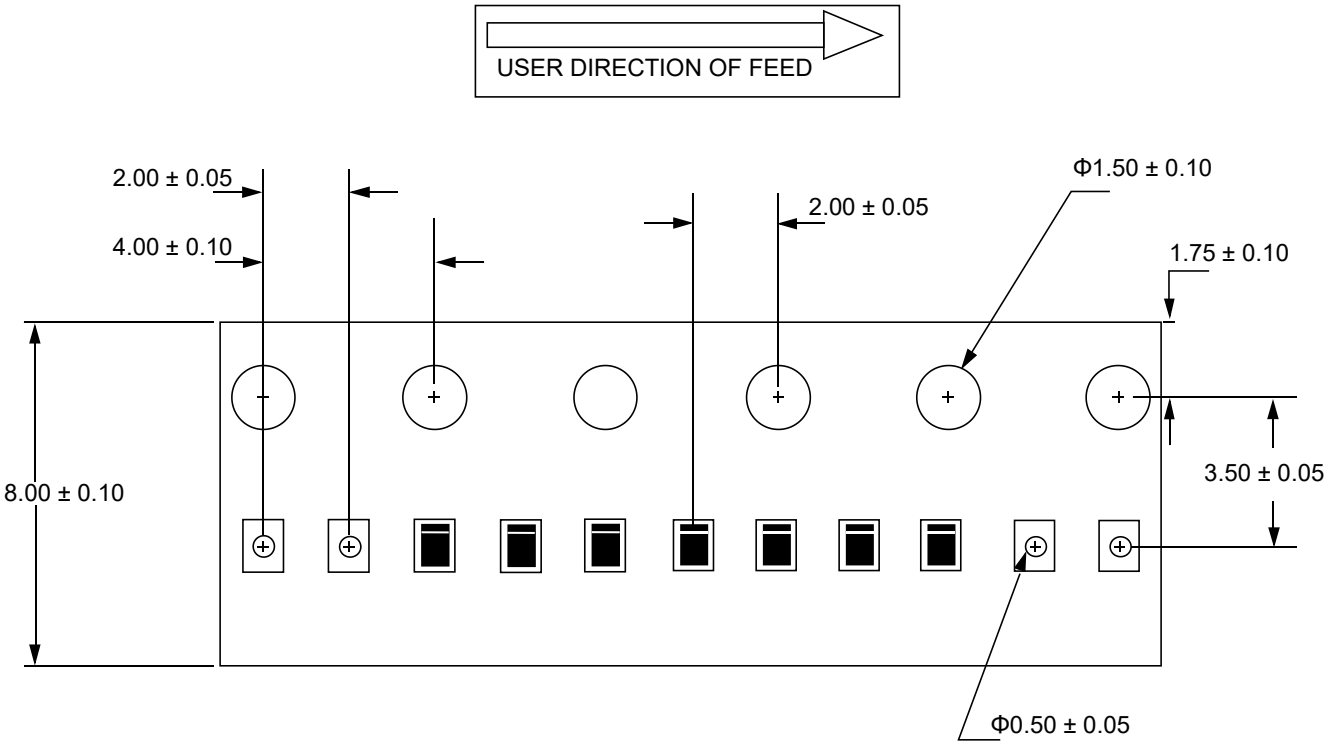
Marking information



Ordering information

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

Load with information



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