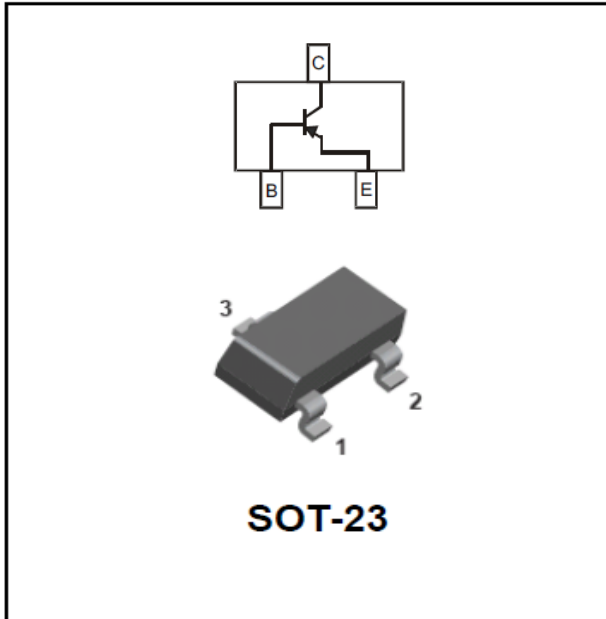


## PNP General Purpose Amplifier



### Features

- Low collector-emitter saturation voltage
- High current capability
- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- Marking: ZF

### Applications

- Supply line switching circuits
- Battery management
- DC-DC convertor
- Strobe flash
- Motor and lamp driver

### ■ Maximum Ratings (Ta=25°C)

Item	Symbol	Unit	Conditions	Value
Collector-Emitter Voltage*	$V_{CE0}$	V	$I_C = -1\text{mA}$ , $I_B = 0$	-40
Collector-Base Voltage	$V_{CBO}$	V	$I_C = -100\mu\text{A}$ , $I_E = 0$	-40
Emitter-Base Voltage	$V_{EBO}$	V	$I_E = -100\mu\text{A}$ , $I_C = 0$	-5
Collector Current	$I_C$	A		-2
Collector Power Dissipation	$P_c$	mW		300
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	°C/W		417
Operation Junction Temperature	$T_j$	°C		150
Storage Temperature	$T_{stg}$	°C		-55 to +150

### ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
PBSS5240T	F2	Approximate 0.008	3000	30000	120000	7" reel



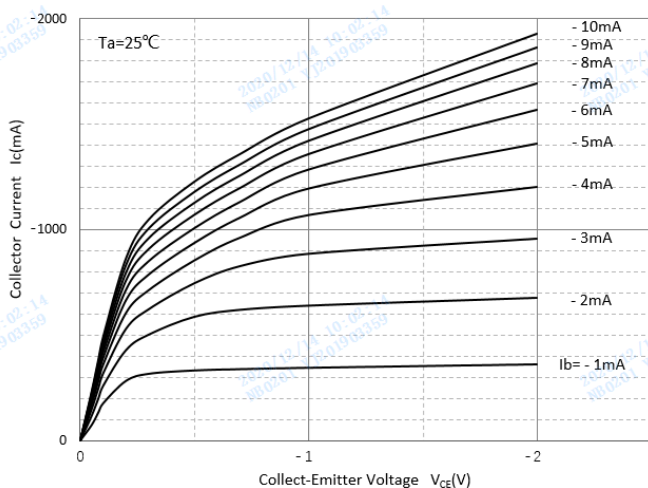
# PBSS5240T

## ■Electrical Characteristics (Ta=25°C)

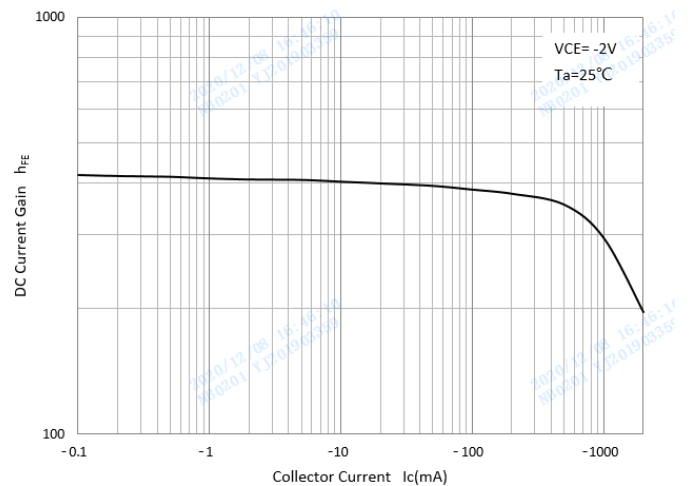
Item	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Voltage	$V_{CE0}$	V	$I_C=-1mA, I_B=0$	-40	
Collector-Base Voltage	$V_{CBO}$	V	$I_C=-100\mu A, I_E=0$	-40	
Emitter-Base Voltage	$V_{EBO}$	V	$I_E=-100\mu A, I_C=0$	-5	
Collector-base Cut-off Current	$I_{CBO}$	nA	$V_{CB}=-30V$		-100
Base-emitter Cut-off Current	$I_{EBO}$	nA	$V_{EB}=-4V$		-100
DC Current Gain	$h_{FE}$		$I_C=-100mA, V_{CE}=-2V$	300	
			$I_C=-500mA, V_{CE}=-2V$	260	
			$I_C=-1A, V_{CE}=-2V$	210	
			$I_C=-2A, V_{CE}=-2V$	100	
Collector-Emitter Saturation Voltage	$V_{CE(sat)1}$	mV	$I_C=-100mA, I_B=-1mA$		-100
	$V_{CE(sat)2}$	mV	$I_C=-500mA, I_B=-50mA$		-110
	$V_{CE(sat)3}$	mV	$I_C=-750mA, I_B=-15mA$		-225
	$V_{CE(sat)4}$	mV	$I_C=-1A, I_B=-50mA$		-225
	$V_{CE(sat)5}$	mV	$I_C=-2A, I_B=-200mA$		-350
Equivalent On-Resistance	$R_{CE(sat)}$	m $\Omega$	$I_C=-500mA, I_B=-50mA$		220
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=-2A, I_B=-200mA$		-1.1
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	V	$I_C=-100mA, V_{CE}=-2V$		-0.75
Transition frequency	$f_T$	MHz	$I_C=-100mA, V_{CE}=-10V, f=100MHz$	100	
Collector Capacitance	$C_{ob}$	pF	$V_{CB}=-10V, I_E=0, f=1MHz$		28

## ■Characteristics(Typical)

Static Characteristic



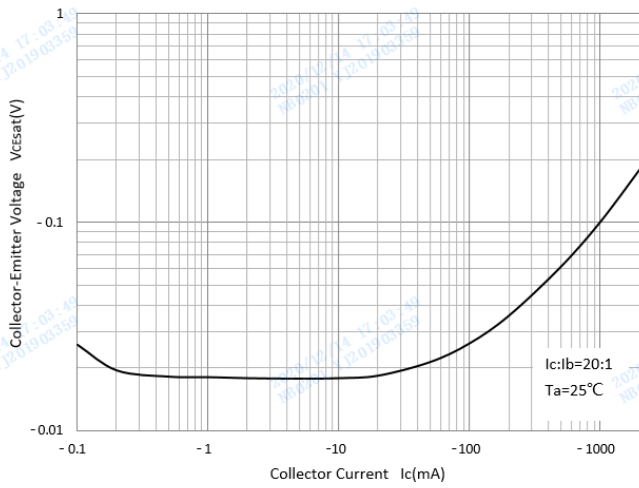
DC Current Gain



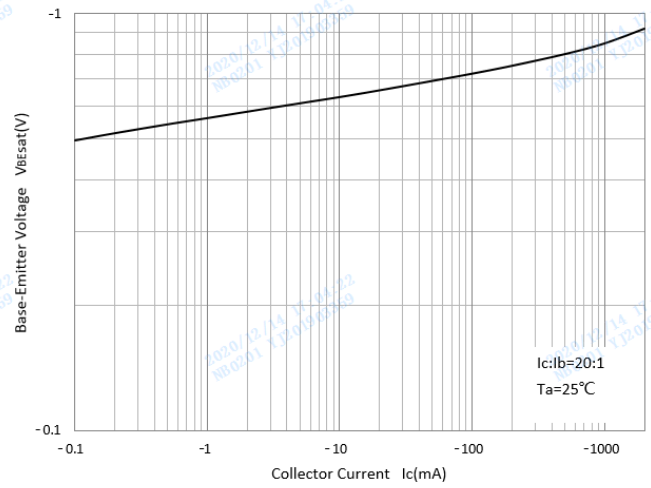


# PBSS5240T

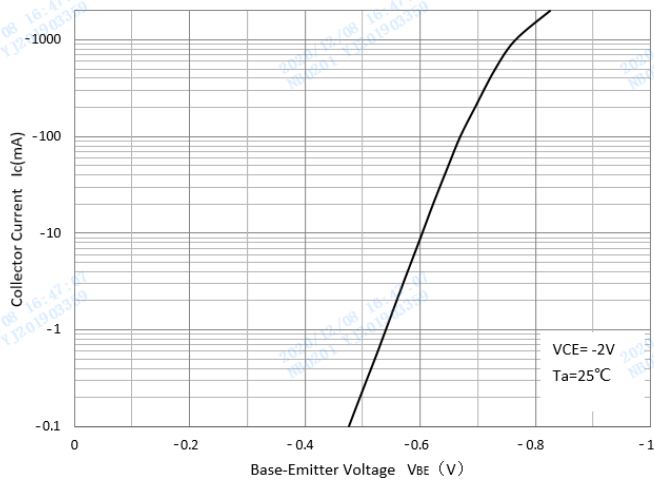
### Collector-Emitter Saturation Voltage



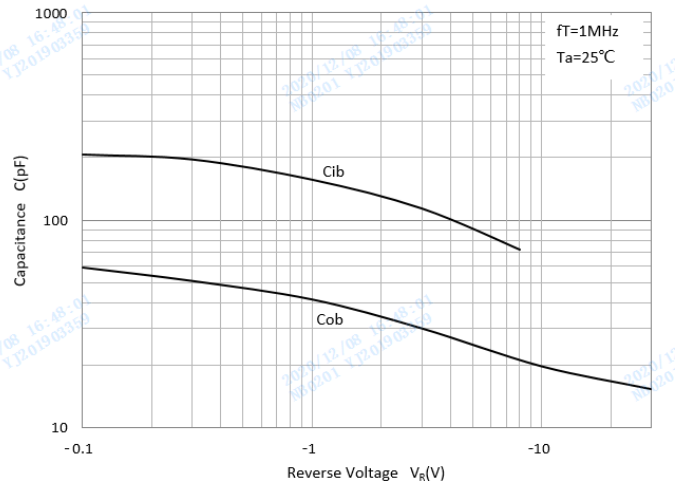
### Base-Emitter Saturation Voltage



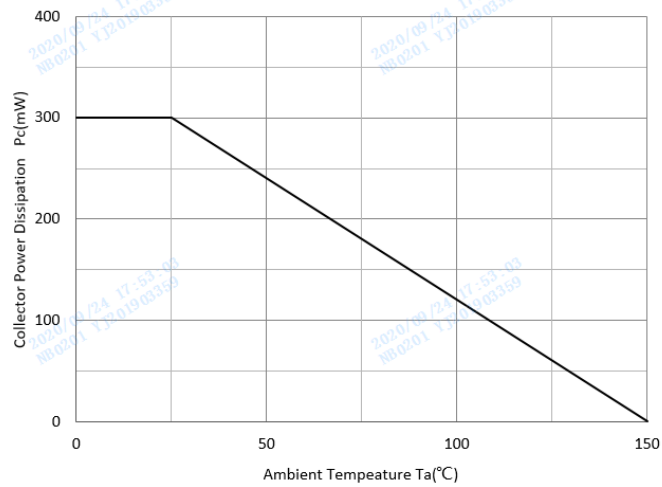
### Base-Emitter On Voltage



### $C_{ob}/C_{ib}-V_{CB}/V_{EB}$



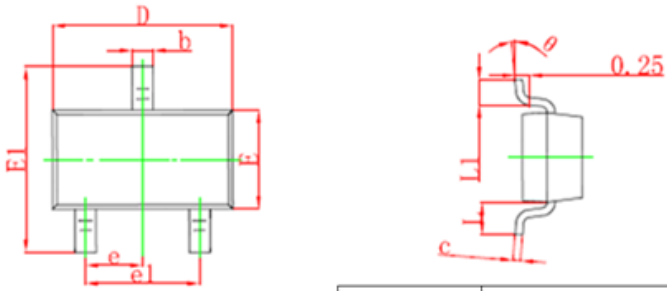
### Collector Power Derating Curve





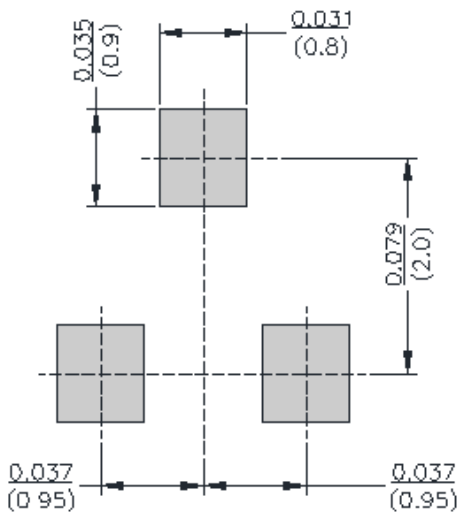
# PBSS5240T

## ■SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

## ■SOT-23 Soldering Footprint





## PBSS5240T

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