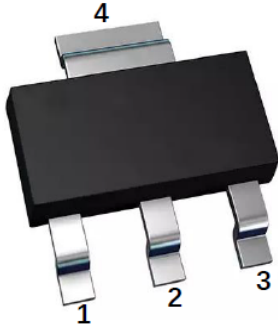


PNP General Purpose Amplifier

SOT-223



1-Base
2-Collector
3-Emitter
4-Collector

Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture sensitivity level 1
- Low collector-emitter saturation voltage

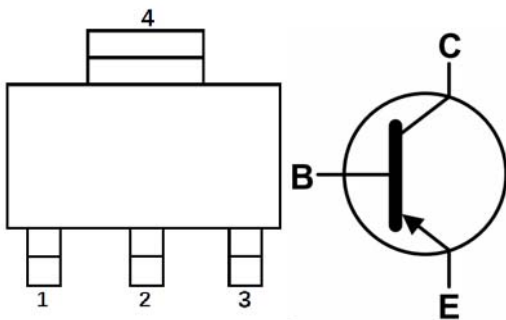
Mechanical Data

- **Package:** SOT-223
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:**

DPLS4140Z

P4140Z

■Equivalent circuit



■Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Value
Minimum Collector-Emitter Voltage	V_{CEO}	V	$I_C = -10\text{mA}$, $I_B = 0$	-140
Minimum Collector-Base Voltage	V_{CBO}	V	$I_C = -100\mu\text{A}$, $I_E = 0$	-180
Minimum Emitter-Base Voltage	V_{EBO}	V	$I_E = -100\mu\text{A}$, $I_C = 0$	-7
Collector Current	I_C	A		-4
Collector Power Dissipation	P_C	mW		500
Operation Junction Temperature	T_j	°C		-55 to +150
Storage Temperature	T_{stg}	°C		-55 to +150

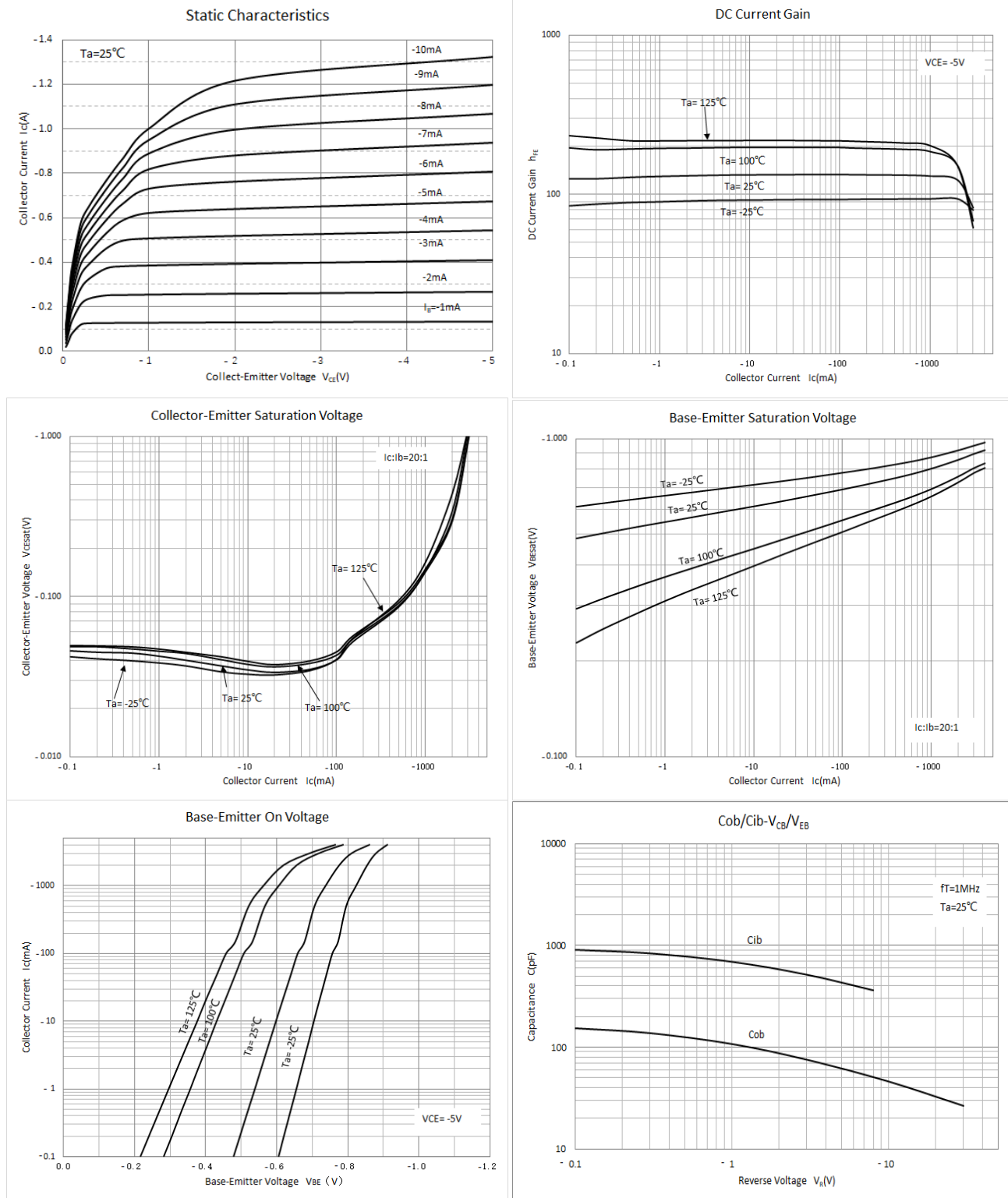
**■Electrical Characteristics** (Ta=25℃ unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-Emitter Voltage	V_{CEO}	V	$I_C=-10mA, I_B=0$	-140		
Collector-Base Voltage	V_{CBO}	V	$I_C=-100\mu A, I_E=0$	-180		
Emitter-Base Voltage	V_{EBO}	V	$I_E=-100\mu A, I_C=0$	-7		
Collector-Base cut-off current	I_{CBO}	μA	$V_{CB}=-150V$			-0.1
Emitter-Base cut-off current	I_{EBO}	μA	$V_{EB}=-6V$			-0.1
DC Current Gain	h_{FE1}		$V_{CE}=-5V, I_C=-10mA$	100		
	h_{FE2}		$V_{CE}=-5V, I_C=-1A$	100		300
	h_{FE3}		$V_{CE}=-5V, I_C=-3A$	45		
Collector-Emitter Saturation Voltage	$V_{CE(sat)1}$	mV	$I_C=-0.1A, I_B=-5mA$			-60
	$V_{CE(sat)2}$	mV	$I_C=-0.5A, I_B=-50mA$			-80
	$V_{CE(sat)3}$	mV	$I_C=-1A, I_B=-100mA$			-120
	$V_{CE(sat)4}$	mV	$I_C=-3A, I_B=-300mA$			-360
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=-3A, I_B=-300mA$	-	-	-1.04
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	V	$V_{CE}=-5V, I_C=-3A$	-	-	-0.93
Output Capacitance	Cob	pF	$V_{CB}=-10V, I_E=0, f=1MHz$		45	

■Ordering Information (Example)

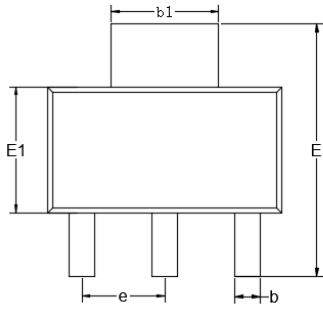
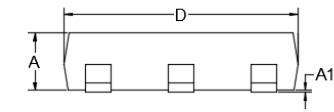
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
DPLS4140Z	F2	Approximate 0.11	2500	5000	25000	13" reel

■ Characteristics (Typical)



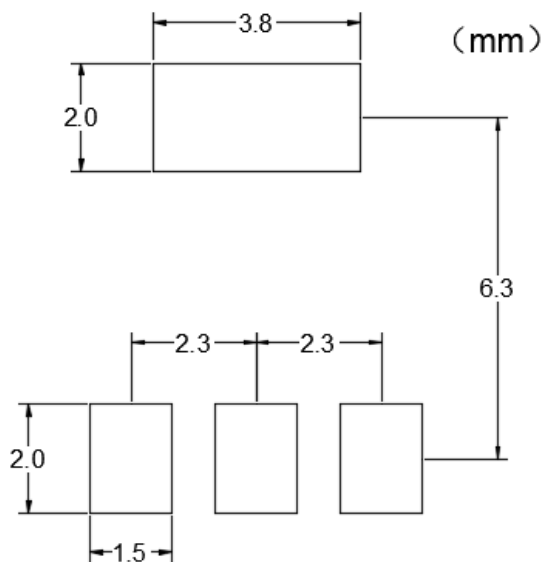


■SOT-223 Package Outline Dimensions



DIM	DIMENSIONS			
	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.0591	0.0670	1.5000	1.7000
A1	0.0008	0.0039	0.0200	0.1000
b	0.0259	0.0330	0.6600	0.8400
b1	0.1140	0.1220	2.9000	3.1000
c	0.0090	0.0138	0.2300	0.3500
D	0.2480	0.2640	6.3000	6.7000
E	0.2637	0.2874	6.7000	7.3000
E1	0.1290	0.1460	3.3000	3.7000
e	0.0866	0.0945	2.2000	2.4000
L	0.0295	0.0492	0.7500	1.2500
θ	0°	10°	0°	10°

■SOT-223 Suggested Pad Layout





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