



### NPN Low Vce(sat) Transistor

Voltage

32V

Current

2A

#### **Features**

- Silicon NPN epitaxial type
- Low Vce(sat) 0.8V(max)@Ic/Ib= 2A / 200mA
- High collector current capability
- Excellent DC current gain characteristics
- Lead free in comply with EU RoHS 2.0
- Green molding compound as per IEC61249 Standard

#### **Mechanical Data**

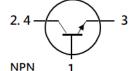
• Case: TO-252AA Package

• Terminals : Solderable per MIL-STD-750, Method 2026

• Approx. Weight: 0.0104 ounces, 0.297 grams

#### **TO-252AA**





#### Pin Assignment:

1. Base

2.4. Collector

3. Emitter

### Maximum Ratings and Thermal Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Collector-Base Voltage	V <sub>CBO</sub>	40	V
Collector-Emitter Voltage	$V_{CEO}$	32	V
Emitter-Base Voltage	V <sub>EBO</sub>	5	V
Collector Current (DC)	lc	2	Α
Collector Current (Pulse)	ICP	3	Α
Base Current (DC)	lΒ	0.2	Α
Collector Power Dissipation	P <sub>D</sub>	2.0	W
Operating Junction and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-55~150	°C
Thermal Resistance from Junction to Ambient (Note)	R <sub>θ</sub> ЈА	62.5	°C/W

Note: Mounted on FR4 with 2oz. PCB at 1 inch square copper pad.





# **Electrical Characteristics** (T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
OFF Characteristics						
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> = 10mA, I <sub>B</sub> = 0A	32	-	-	V
Collector-Base Breakdown Voltage	ВУсво	I <sub>C</sub> = 0.1mA, I <sub>E</sub> = 0A	40	-	-	V
Emitter-Base Breakdown Voltage	ВУево	I <sub>E</sub> = 0.1mA, I <sub>C</sub> = 0A	5	-	-	V
Collector-Base Cutoff Current	Ісво	V <sub>CB</sub> = 40V, I <sub>E</sub> = 0A	-	-	100	nA
Collector-Emitter Cutoff Current	Ices	V <sub>CES</sub> = 32V	-	-	100	nA
Emitter-Base Cutoff Current	<b>I</b> EBO	V <sub>EB</sub> = 5V	-	-	100	nA
ON characteristics						
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = 3V I <sub>C</sub> = 100mA	180	-	-	
		V <sub>CE</sub> = 3V I <sub>C</sub> = 500mA	180	-	390	
Collector-Emitter Saturation Voltage	VCE(SAT)	I <sub>C</sub> = 500mA, I <sub>B</sub> = 50mA	-	100	250	mV
		I <sub>C</sub> = 1A, I <sub>B</sub> = 100mA	-	250	400	
		I <sub>C</sub> = 2A, I <sub>B</sub> = 200mA	-	350	800	
Base-Emitter Saturation voltage	V <sub>BE(SAT)</sub>	I <sub>C</sub> = 2A, I <sub>B</sub> = 200mA	ı	0.85	1.3	V
Base-Emitter ON voltage	V <sub>BE(ON)</sub>	V <sub>CE</sub> = 3V, I <sub>C</sub> = 2A	-	0.95	1.2	V
Transition Frequency	f⊤	I <sub>C</sub> = 0.5A, V <sub>CE</sub> = 5V f=100MHz	ı	270	-	MHz
Collector Output Capacitance	Сов	V <sub>CB</sub> = 10V I <sub>E</sub> = 0A, f=1MHz	-	14	-	pF





#### TYPICAL CHARACTERISTIC CURVES

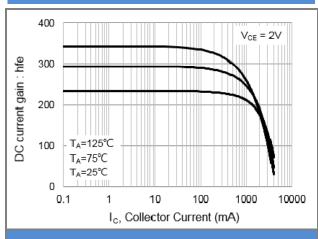


Fig.1 DC Current Gain

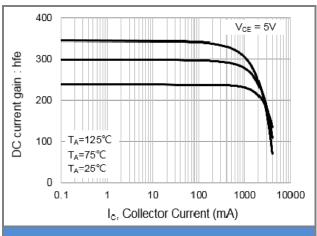


Fig.2 DC Current Gain

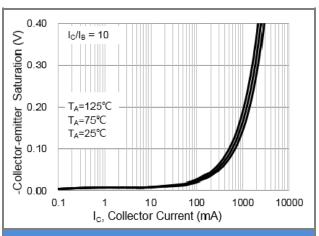


Fig.3 Collector-Emitter Saturation Voltage

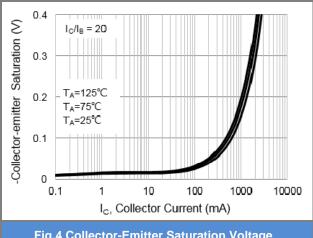
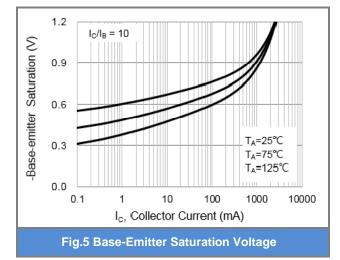


Fig.4 Collector-Emitter Saturation Voltage



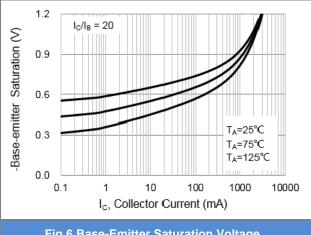


Fig.6 Base-Emitter Saturation Voltage





#### **TYPICAL CHARACTERISTIC CURVES**

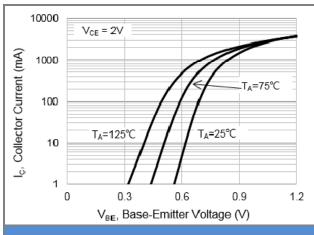
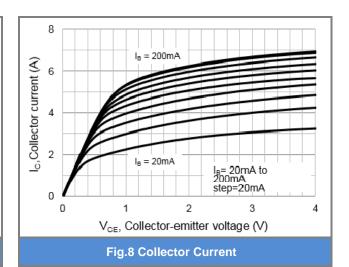
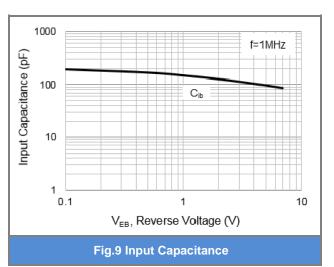
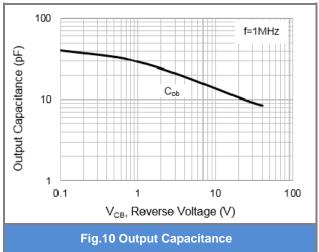
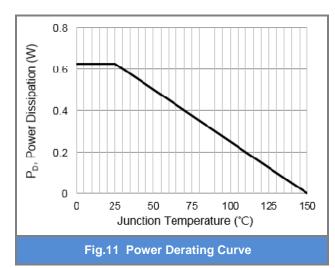


Fig.7 Base-Emitter Voltage









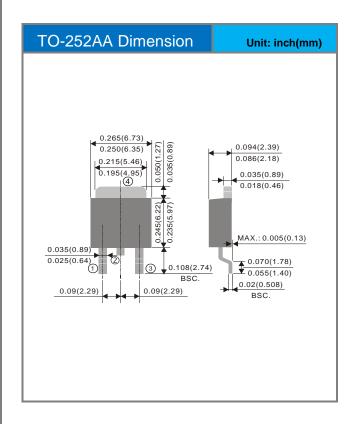


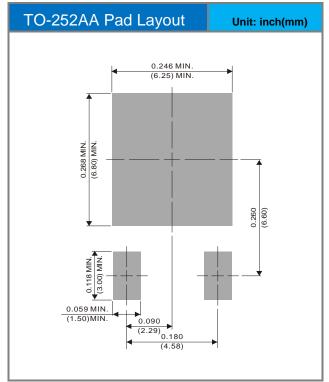


### **Part No Packing Code Version**

Part No Packing Code	Package Type	Packing Type	Marking	Version
PBSS4232DD_L2_00001	TO-252AA	3,000 pcs / 13" reel	4232DD	Halogen free

### **Packaging Information & Mounting Pad Layout**









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