# 2SD1207

# **Bipolar Transistor** 50V, 2A, Low VCE(sat) NPN Single MP



http://onsemi.com

#### **Applications**

• Power supplies, relay drivers, lamp drivers, and automotive wiring

#### **Features**

- FBET and MBIT processed
- Low saturation voltage
- · Large current capacity and wide SOA

#### **Specifications**

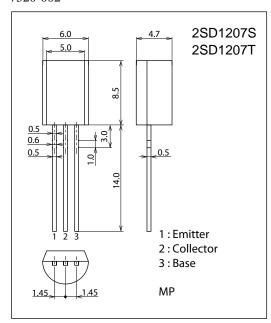
**Absolute Maximum Ratings** at Ta = 25°C

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Parameter	Symbol	Conditions	Ratings	Unit		
Collector to Base Voltage	VCBO		60	V		
Collector to Emitter Voltage	VCEO		50	>		
Emitter to Base Voltage	VEBO		6	V		
Collector Current	IC		2	Α		
Collector Current (Pulse)	ICP		4	Α		
Collector Dissipation	PC		1	W		
Junction Temperature	Тј		150	°C		
Storage Temperature	Tstg		-55 to +150	°C		

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

#### **Package Dimensions**

unit : mm (typ) 7520-002



#### **Product & Package Information**

• Package : MP

• JEITA, JEDEC : SC-51, TO-92(1-WATT), TO-226AE

• Minimum Packing Quantity : 1,000 pcs./box

#### Marking

# RANKJILOTNO

### **Electrical Connection**

#### **Electrical Characteristics** at Ta = 25°C

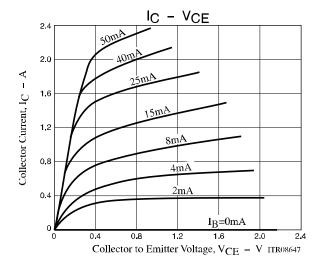
D		2 ""	Ratings			
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector Cutoff Current	ICBO	V <sub>CB</sub> =50V, I <sub>E</sub> =0A			0.1	μΑ
Emitter Cutoff Current	IEBO	V <sub>EB</sub> =4V, I <sub>C</sub> =0A			0.1	μΑ
DC Current Gain	hFE1	V <sub>CE</sub> =2V, I <sub>C</sub> =100mA	140		400	
	hFE2	V <sub>CE</sub> =2V, I <sub>C</sub> =1.5A	40			
Gain-Bandwidth Product	fŢ	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA		150		MHz
Output Capacitance	Cob	V <sub>CB</sub> =10V, f=1MHz		12		pF
Collector to Emitter Saturation Voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> =1A, I <sub>B</sub> =50mA		0.15	0.4	V
Base to Emitter Saturation Voltage	V <sub>BE</sub> (sat)	I <sub>C</sub> =1A, I <sub>B</sub> =50mA		0.9	1.2	V
Collector to Base Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =10μA, I <sub>E</sub> =0A	60			V
Collector to Emitter Breakdown Voltage	V(BR)CEO	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	50			V
Emitter to Base Breakdown Voltage	V(BR)EBO	I <sub>E</sub> =10μA, I <sub>C</sub> =0A	6			V

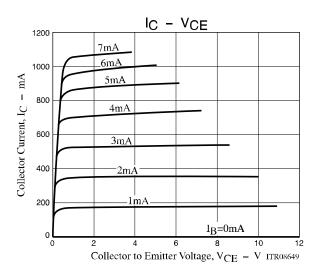
<sup>\*:</sup> The 2SD1207 is graded as follows by  $h_{\mbox{\scriptsize FE}}$  at 100mA :

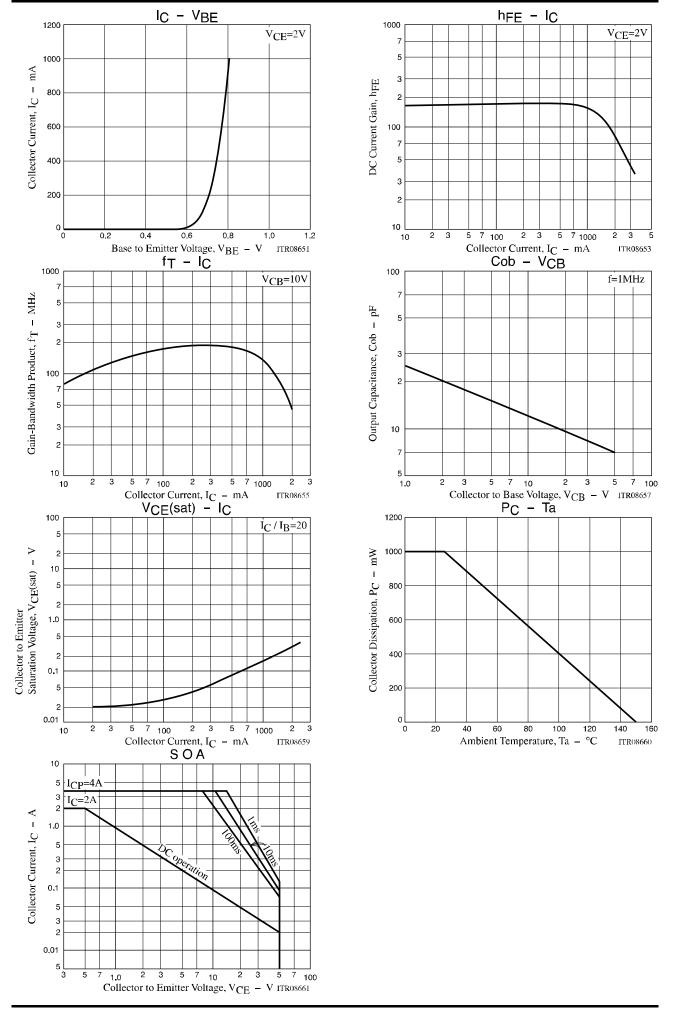
Rank	S	T
hFE	140 to 280	200 to 400

## **Ordering Information**

Device	Package	Shipping	Memo
2SD1207S	MP	500pcs./bag	
2SD1207S-AE		1,000pcs./box	Db E
2SD1207T		500pcs./bag	Pb Eree
2SD1207T-AE		1,000pcs./box	

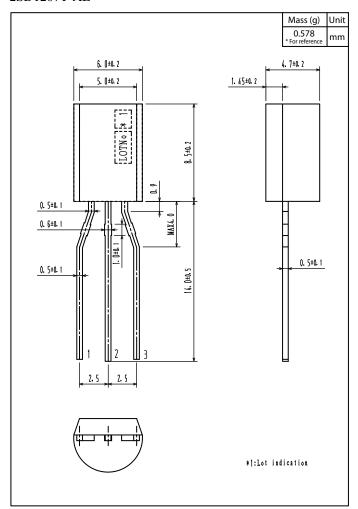






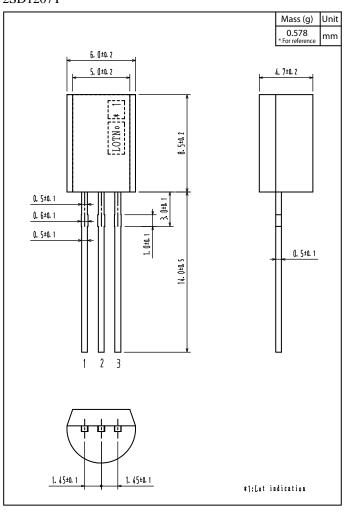
## **Outline Drawing**

2SD1207S-AE 2SD1207T-AE



#### **Outline Drawing**

2SD1207S 2SD1207T



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