



Micro Commercial Components

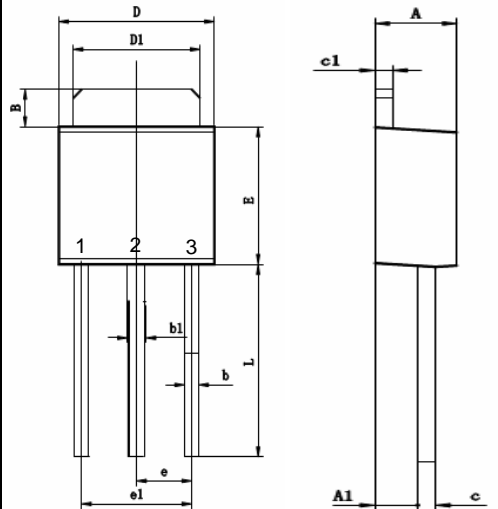


Micro Commercial Components  
20736 Marilla Street Chatsworth  
CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

# 2SC3303

## NPN Silicon Plastic-Encapsulate Transistor

### TO-251



PIN 1. BASE  
PIN 2.4 COLLECTOR  
PIN 3. EMITTER

#### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.087	.094	2.20	2.40	
A1	.042	.054	1.05	1.35	
B	.053	.065	1.35	1.65	
b	.020	.028	0.50	0.70	
b1	.028	.035	0.70	0.90	
c	.017	.023	0.43	0.58	
c1	.017	.023	0.43	0.58	
D	.250	.262	6.35	6.65	
D1	.205	.213	5.20	5.40	
E	.213	.224	5.40	5.70	
e	0.091TYP		2.300TYP		
e1	.177	.185	4.50	4.70	
L	.295	.311	7.50	7.90	

## Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Capable of 1.0Watts of Power Dissipation.
- Collector-current 5A
- Collector-base Voltage 100V
- Operating and storage junction temperature range: -55°C to +150°C
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
<b>OFF CHARACTERISTICS</b>				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=10mA$ , $I_B=0$ )	80		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=100\mu A$ , $I_E=0$ )	100		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=100\mu A$ , $I_C=0$ )	7.0		Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=100Vdc$ , $I_E=0$ )		1	$\mu A$
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=7.0Vdc$ , $I_C=0$ )		1	$\mu A$

### ON CHARACTERISTICS

$h_{FE(1)}$	DC Current Gain ( $I_C=1.0A$ , $V_{CE}=1.0Vdc$ )	70	240	
$h_{FE(2)}$	DC Current Gain ( $I_C=3.0A$ , $V_{CE}=1Vdc$ )	40		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=3000mA$ , $I_B=150mA$ )		0.4	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ( $I_C=3000mA$ , $I_B=150mA$ )		1.2	Vdc
$f_T$	Transistor Frequency ( $I_C=1.0A$ , $V_{CE}=4Vdc$ )	20(Typ)		MHz
$C_{ob}$	Collector Output Capacitance ( $I_E=0$ , $V_{CB}=10Vdc$ , $f=1MHz$ )	80(Typ)		pF

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.  
2.  $h_{FE(1)}$  Range O:70-140; Y:120-240



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### Ordering Information :

Device	Packing
Part Number-BP	Bulk; 80pcs/Tube

Note : Adding "-HF" suffix for halogen free, eg. Part Number-BP-HF

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