

# 2SD400

TO-92MOD Transistor (NPN)



- 1. EMITTER
- 2. COLLECTOR
- 3. BASE

### **Features**

♦ Low-Frequency power Amp, Electronic Governor Applications

### MAXIMUM RATINGS (T<sub>A</sub>=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units	
V <sub>CBO</sub>	Collector-Base Voltage	25	V	
V <sub>CEO</sub>	Collector-Emitter Voltage	25	V	
V <sub>EBO</sub>	Emitter-Base Voltage	5	V	
Ic	Collector Current -Continuous	1	Α	
Pc	Collector Power Dissipation	0.9	W	
TJ	Junction Temperature	150	$^{\circ}$	
T <sub>stg</sub>	Storage Temperature	-55-150	°C	

### 5.800 6.200 0.400 0.600 1.100 0.000 0.380 1.500 TYP 2.900 3.100 1.500 TYP 2.900 0.300 1.700 0.500 1.7000 1.7

Dimensions in inches and (millimeters)

### ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =10μA, I <sub>E</sub> =0	25			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =1mA, I <sub>B</sub> =0	25			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10μA, I <sub>C</sub> =0	5			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =20V, I <sub>E</sub> =0			1	μΑ
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =4V, I <sub>C</sub> =0			1	μA
DC current main	h <sub>FE(1)</sub>	$V_{CE}=2V$ , $I_{C}=50$ mA	60		560	
DC current gain	h <sub>FE(2)</sub>	$V_{CE}=2V$ , $I_{C}=1A$	30			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA			0.3	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA			1.2	V
Transition frequency	f⊤	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA		180		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, f=1MHz		15		pF

# CLASSIFICATION OF $h_{FE(1)}$

Rank	D	E	F	G
Range	60-120	100-200	160-320	280-560





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# **Typical Characteristics**

