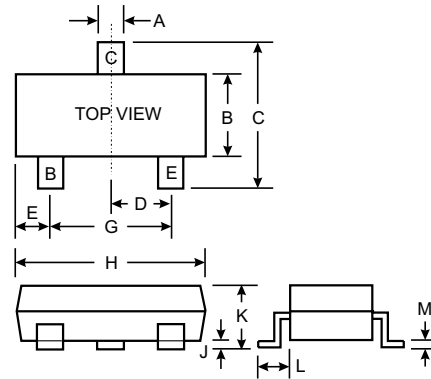


**Features**

- Epitaxial Planar Die Construction
- Ideal for Medium Power Amplification and Switching
- High Current Gain
- Complement to DMBT9022

**Mechanical Data**

- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram
- Marking: K2S
- Weight: 0.008 grams (approx.)



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.19	1.40
C	2.10	2.50
D	0.89	1.05
E	0.45	0.61
G	1.78	2.05
H	2.65	3.05
J	0.013	0.15
K	0.89	1.10
L	0.45	0.61
M	0.076	0.178
All Dimensions in mm		

**Maximum Ratings** @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	DMBT9922	Unit
Collector-Base Voltage	V <sub>CBO</sub>	-50	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-40	V
Emitter-Base Voltage	V <sub>EBO</sub>	-5.0	V
Collector Current - Continuous (Note 1)	I <sub>C</sub>	-100	mA
Power Dissipation (Note 1)	P <sub>d</sub>	225	mW
Thermal Resistance, Junction to Ambient (Note 1)	R <sub>θJA</sub>	556	K/W
Operating and Storage and Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

**Electrical Characteristics** @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
<b>OFF CHARACTERISTICS (Note 2)</b>					
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	-50	—	V	-I <sub>C</sub> = 50μA, I <sub>E</sub> = 0
Collector-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	-40	—	V	-I <sub>C</sub> = 1.0mA, I <sub>B</sub> = 0
Emitter-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	-5.0	—	V	-I <sub>E</sub> = 50μA, I <sub>C</sub> = 0
Collector Cutoff Current	I <sub>CBO</sub>	—	-500	nA	V <sub>CB</sub> = -30V
Emitter Cutoff Current	I <sub>EBO</sub>	—	-500	nA	V <sub>EB</sub> = -4.0V
<b>ON CHARACTERISTICS (Note 2)</b>					
DC Current Gain	h <sub>FE</sub>	300	600	—	I <sub>C</sub> = -1.0mA, V <sub>CE</sub> = -6.0V
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)</sub>	—	-0.5	V	I <sub>C</sub> = -50mA, I <sub>B</sub> = -5.0mA
<b>SMALL SIGNAL CHARACTERISTICS</b>					
Output Capacitance	C <sub>obo</sub>	2.0 Typ.	3.5	pF	V <sub>CB</sub> = -12V, f = 1.0MHz, I <sub>E</sub> = 0
Current Gain-Bandwidth Product	f <sub>T</sub>	140 Typ.	—	MHz	V <sub>CE</sub> = -12V, I <sub>C</sub> = -2.0mA, f = 100MHz

- Notes: 1. Valid provided that terminals are kept at ambient temperature.  
2. Pulse test: Pulse width ≤ 300μs, duty cycle ≤ 2%.