



DMBT9022

NPN SMALL SIGNAL SURFACE MOUNT TRANSISTOR

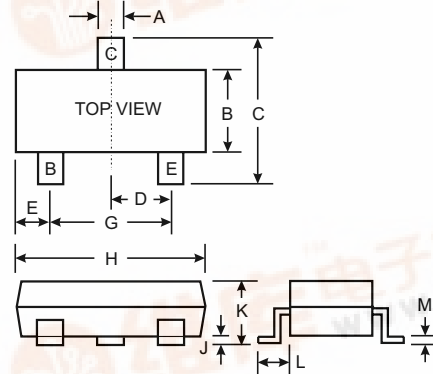
NEW PRODUCT

Features

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

Mechanical Data

- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram
- Marking: K1S
- 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_A = 25°C unless otherwise specified

Characteristic	Symbol	DMBT9022	Unit
Collector-Base Voltage	V _{CB0}	50	V
Collector-Emitter Voltage	V _{CEO}	40	V
Emitter-Base Voltage	V _{EBO}	5.0	V
Collector Current - Continuous (Note 1)	I _C	100	mA
Power Dissipation (Note 1)	P _d	225	mW
Thermal Resistance, Junction to Ambient (Note 1)	R _{θJA}	556	K/W
Operating and Storage and Temperature Range	T _J , T _{STG}	-55 to +150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 2)					
Collector-Base Breakdown Voltage	V _{(BR)CBO}	50	—	V	I _C = 50μA, I _E = 0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	40	—	V	I _C = 1.0mA, I _B = 0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	5.0	—	V	I _E = 50μA, I _C = 0
Collector Cutoff Current	I _{CB0}	—	500	nA	V _{CB} = 30V
Emitter Cutoff Current	I _{EBO}	—	500	nA	V _{EB} = 4.0V
ON CHARACTERISTICS (Note 2)					
DC Current Gain	h _{FE}	270	630	—	I _C = 1.0mA, V _{CE} = 6.0V
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	—	0.4	V	I _C = 50mA, I _B = 5.0mA
SMALL SIGNAL CHARACTERISTICS					
Output Capacitance	C _{obo}	2.0 Typ.	3.5	pF	V _{CB} = 12V, f = 1.0MHz, I _E = 0

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

