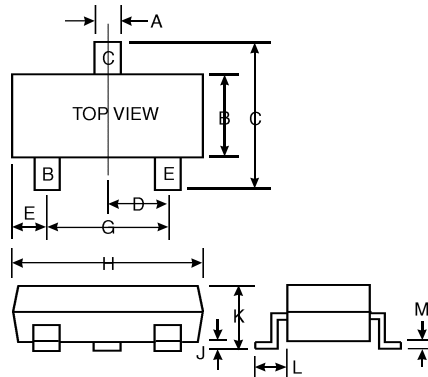


Features

Epitaxial Planar Die Construction
Complementary NPN Type Available
(MMBTA42)
Ideal for Medium Power Amplification and
Switching

Mechanical Data

Case: SOT-23, Molded Plastic
Terminals: Solderable per MIL-STD-202,
Method 208
Terminal Connections: See Diagram
Marking: K3R, 2D
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	MMBTA92	Unit
Collector-Base Voltage	V _{CB0}	-300	V
Collector-Emitter Voltage	V _{CEO}	-300	V
Emitter-Base Voltage	V _{EBO}	-5.0	V
Collector Current (Note 1) (Note 3)	I _C	-100	mA
Power Dissipation (Note 1)	P _d	350	mW
Thermal Resistance, Junction to Ambient (Note 1)	R _{JA}	357	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}	-300		V	I _C = -100 A, I _E = 0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-300		V	I _C = -1.0mA, I _B = 0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-5.0		V	I _E = -100 A, I _C = 0
Collector Cutoff Current	I _{CBO}		-250	nA	V _{CB} = -200V, I _E = 0
Collector Cutoff Current	I _{EBO}		-100	nA	V _{CE} = -3.0V, I _C = 0
ON CHARACTERISTICS (Note 2)					
DC Current Gain	h _{FE}	25 40 25			I _C = -1.0mA, V _{CE} = -10V I _C = -10mA, V _{CE} = -10V I _C = -30mA, V _{CE} = -10V
Collector-Emitter Saturation Voltage	V _{CE(SAT)}		-0.5	V	I _C = -20mA, I _B = -2.0mA
Base- Emitter Saturation Voltage	V _{BE(SAT)}		-0.9	V	I _C = -20mA, I _B = -2.0mA
SMALL SIGNAL CHARACTERISTICS					
Output Capacitance	C _{cb}		6.0	pF	V _{CB} = -20V, f = 1.0MHz, I _E = 0
Current Gain-Bandwidth Product	f _T	50		MHz	V _{CE} = -20V, I _C = -10mA, f = 100MHz

- Notes:
- Valid provided that terminals are kept at ambient temperature.
 - Pulse test: Pulse width 300 s, duty cycle 2%.
 - When operated within safe operating area constraints.

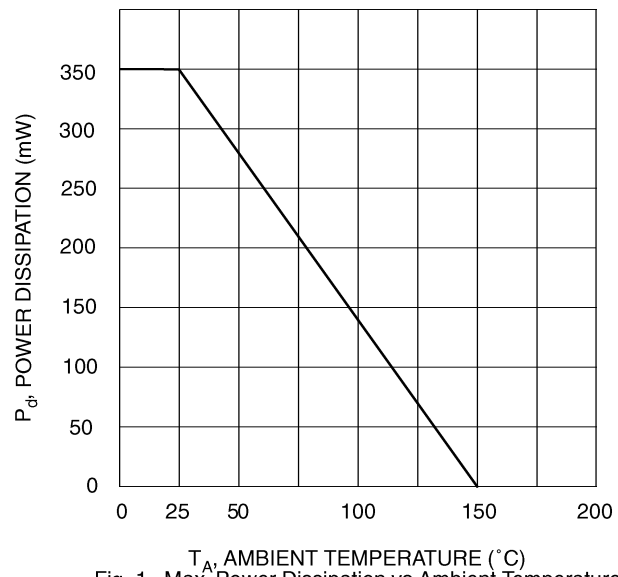


Fig. 1, Max Power Dissipation vs Ambient Temperature