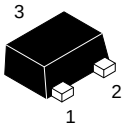
NPN HF/UHF T

MMBTH10M3T5G

The MMBTH10M3T5G device is a spin−off of our popular SOT−23 three−leaded device. It is designed for general purpose VHF/UHF applications and is housed in the SOT−723 surface mount package. This device is ideal for low−power surface mount applications where board space is at a premium.

Features

- Reduces Board Space
- This is a Halide−Free Device
- This is a Pb−Free Device



MARKING DIAGRAM

AJ = Specific Device Code
M = Date Code

SOT−723
CASE 631AA
STYLE 1

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector−Emitter Voltage	V_{CEO}	25	Vdc
Collector−Base Voltage	V_{CBO}	30	Vdc
Emitter−Base Voltage	V_{EBO}	3.0	Vdc

THERMAL CHARACTERISTICS

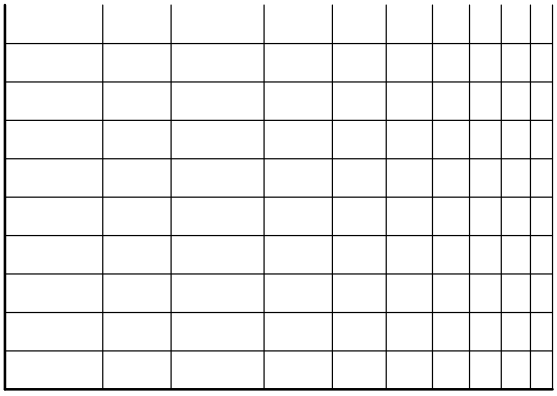
Characteristic	Symbol	Max	Unit
Total Device Dissipation FR−5 Board (Note 1) T_A = 25°C Derate above 25°C	P_D	265 2.1	mW mW/°C
Thermal Resistance, Junction−to−Ambient	$R_{\theta JA}$	470	°C/W
Total Device Dissipation Alumina Substrate, (Note 2) T_A = 25°C Derate above 25°C	P_D	640 5.1	mW mW/°C
Thermal Resistance, Junction−to−Ambient	$R_{\theta JA}$	195	°C/W
Junction and Storage Temperature	T_J, T_{stg}	−55 to +150	°C

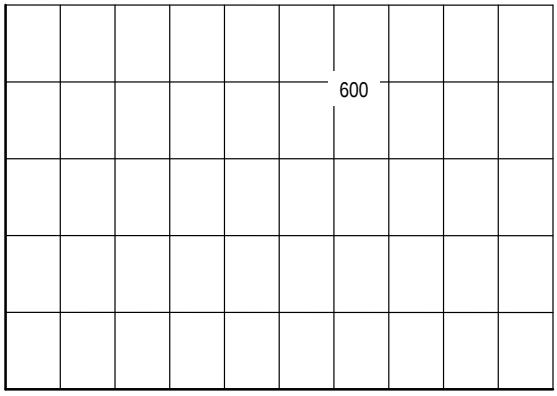
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.
1. FR−5 = 1.0 × 0.75 × 0.062 in.
2. Alumina = 0.4 × 0.3 × 0.024 in. 99.5% alumina.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Collector−Emitter Breakdown Voltage (I_C = 1.0 mAdc, I_B = 0)	$V_{(BR)CEO}$	25	−	−	Vdc
Collector−Base Breakdown Voltage (I_C = 100 μAdc, I_E = 0)	$V_{(BR)CBO}$	30	−	−	Vdc
Emitter−Base Breakdown Voltage (I_E = 10 μAdc, I_C = 0)	$V_{(BR)EBO}$				

TYPICAL CHARACTERISTICS





TYPICAL CHARACTERISTICS

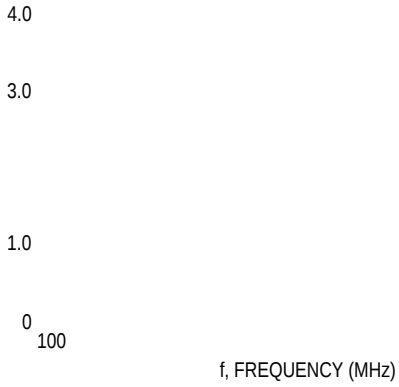


Figure 5. Rectangular Form

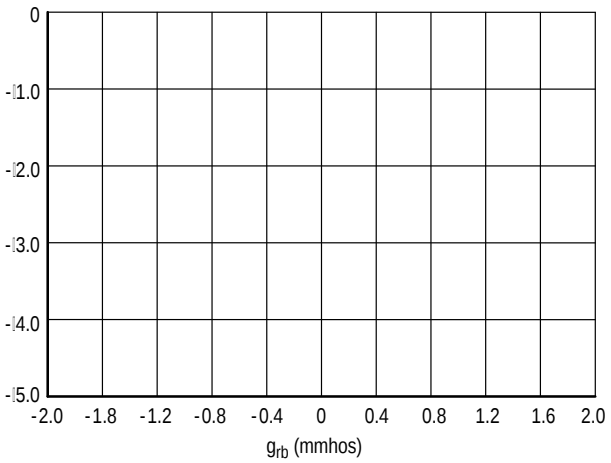


Figure 6. Polar Form

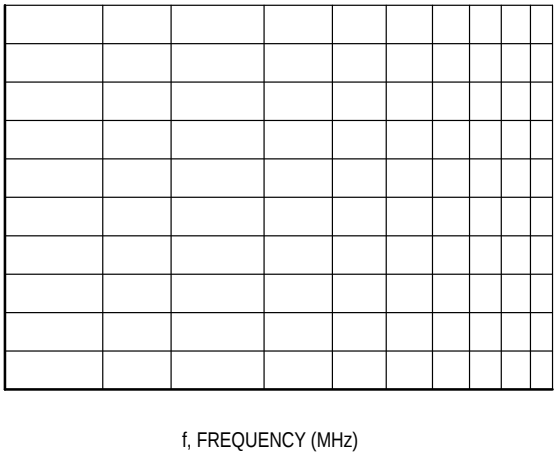


Figure 7. Rectangular Form

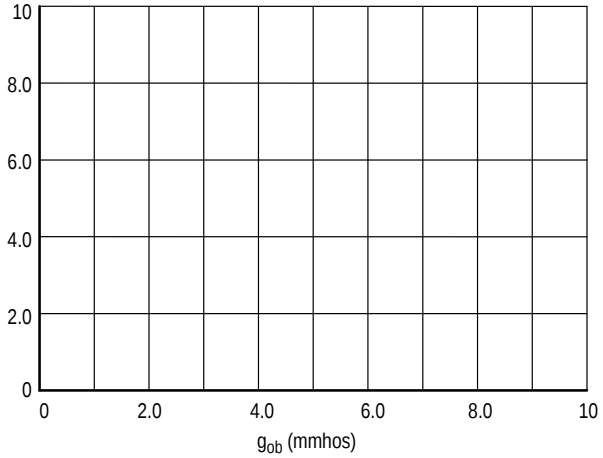


Figure 8. Polar Form

SOT−723 1.20x0.80x0.50, 0.40P

GENERIC MARKING