PULSED MICROWAVE POWER TRANSISTOR

NPN silicon power transistor for use in a common-base, class-C narrowband amplifier in avionics applications.

It operates in pulsed conditions only and is recommended for IFF applications.

Features

- Interdigitated structure giving a high emitter efficiency
- Diffused emitter ballasting resistors providing excellent current sharing and withstanding a high VSWR
- Gold metallization realizing a very good stability of the characteristics and excellent life-time
- Multicell geometry giving good balance of dissipated power and low thermal resistance

The transistor is housed in a metal ceramic flange envelope (FO-91).

QUICK REFERENCE DATA

Microwave performance up to T_{mb} = 25 °C in a common-base class-C narrowband amplifier

mode of operation	f GHz	V_{CC} V	P_L W	G_p dB	η_C %	z_i Z_L Ω
class-B t_p = 100 μs, δ = 10%	1.09	50	⩾ 300	⩾ 7	⩾ 30	see table

MECHANICAL DATA

Dimensions in mm

FO-91 (see Fig. 1)

WARNING

Product and environmental safety — toxic materials

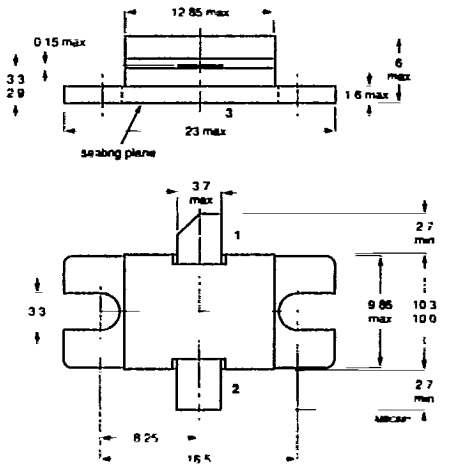
This product contains beryllium oxide. The product is entirely safe provided that the BeO slab is not damaged. All persons who handle, use or dispose of this product should be aware of its nature and of the necessary safety precautions.

After use, dispose of as chemical or special waste according to the regulations applying at the location of the user. It must never be thrown out with general industrial or domestic waste.

MECHANICAL DATA

Fig. 1 FO-91.

Dimensions in mm



Pinning:

1 = collector
2 = emitter
3 = base

Torque on screw: max. 0.5 Nm

Recommended screw: M3

RATINGS

Limiting values in accordance with the Absolute Maximum System (IEC 134)

Collector-base voltage, open emitter	V_{CBO}	max.	65 V
Collector-emitter voltage, $R_{BE} = 0$	V_{CES}	max.	60 V
Emitter-base voltage, open collector	V_{EBO}	max.	3 V