Band-switching diodes

## BA482; BA483; BA484

FEATURES

- Continuous reverse voltage:
  max. 35 V
- Continuous forward current:
  max. 100 mA
- Low diode capacitance:
  max. 1.0 to 1.6 pF
- Low diode forward resistance:
  max. 0.7 to 1.2 Ω.

APPLICATION

- VHF television tuners.

DESCRIPTION

Planar high performance band-switching diode in a hermetically sealed glass SOD68 (DO-34) package.
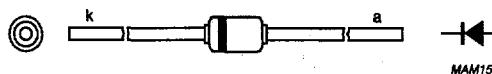
MAM156

The diodes are type branded.

Fig.1 Simplified outline (SOD68; DO-34) and symbol.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
V_R	continuous reverse voltage	–	35	V
I_F	continuous forward current	–	100	mA
T_{stg}	storage temperature	–65	+150	°C
T_j	junction temperature	–	150	°C

ELECTRICAL CHARACTERISTICS

T_j = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
V_F	forward voltage	I_F = 100 mA; see Fig.2	–	1.2	V
I_R	reverse current	see Fig.3			
		V_R = 20V	–	100	nA
		V_R = 20 V; T_{amb} = 75 °C	–	1	µA
C_d	diode capacitance	f = 1 to 100 MHz; V_R = 3 V; see Fig.4			
	BA482		0.8	1.2	pF
	BA483		0.7	1.0	pF
	BA484		1.0	1.6	pF
r_D	diode forward resistance	I_F = 3 mA; f = 200 MHz; see Fig.5			
	BA482		0.6	0.7	Ω
	BA483		0.8	1.2	Ω
	BA484		0.8	1.2	Ω

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j\text{-}tp}$	thermal resistance from junction to tie-point	lead length 10 mm	300	K/W
$R_{th\ j\text{-}a}$	thermal resistance from junction to ambient	lead length 10 mm; note 1	500	K/W

Note

1. Device mounted on a FR4 printed-circuit board without metallization pad.

GRAPHICAL DATA

(1) $T_j = 75\ °C$; typical values.
(2) $T_j = 25\ °C$; typical values.
(3) $T_j = 25\ °C$; maximum values.

Fig.2   Forward current as a function of
forward voltage.

$V_R = 20$ V.
Solid line: maximum values.
Dotted line: typical values.

Fig.3   Reverse current as a function of
junction temperature.
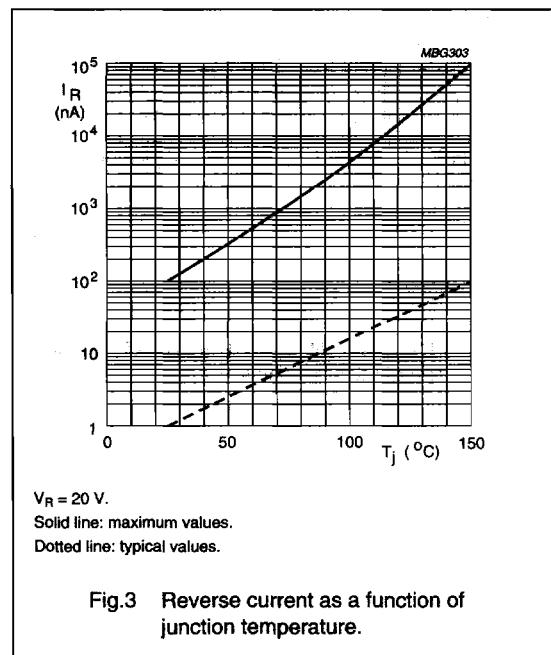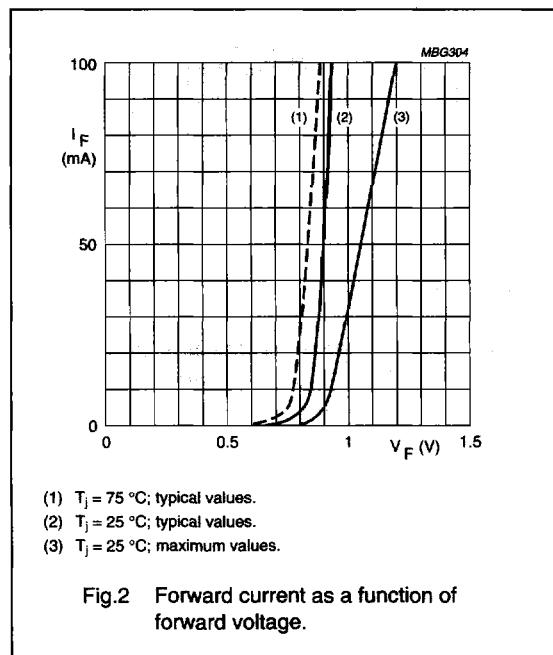
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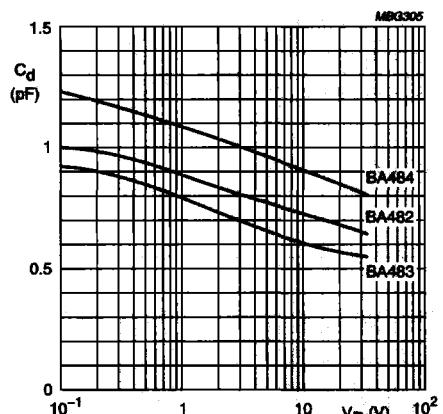
f = 1 to 100 MHz; T_j = 25 °C.

Fig.4   Diode capacitance as a function of reverse
voltage; typical values.
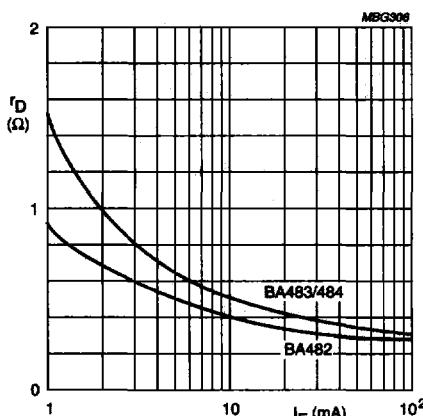
f = 200 MHz; T_j = 25 °C.

Fig.5   Diode forward resistance as a function of
forward current; typical values.