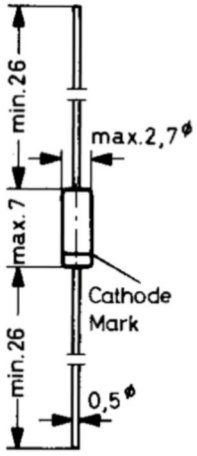
AA 143

Germanium Gold Bonded Diode
Diode for general use, switching and RF-demodulator circuits. Particularly suited for ratio detectors and discriminator circuits. Its low spread of characteristics allows omitting the usual matching when used in ratio detector circuits.



Glass case JEDEC DO-7
51 A 2 according to DIN 41880
Weight approx. 0.2 g
Dimensions in mm

Marking either by stamping AA 143
or by code rings (brown-yellow-orange)

These diodes are delivered taped.
Details see „Taping".

Maximum Ratings

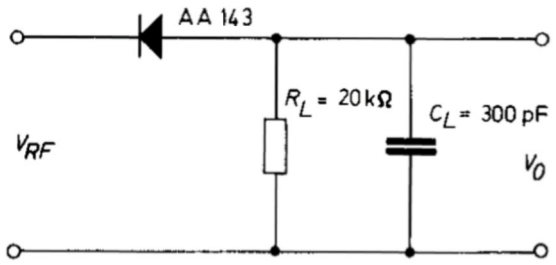
Reverse voltage	V_R	25	V
Peak reverse voltage	V_{RM}	30	V
Rectified current (average) (half wave rectification) with resist. load $@T_{amb}$ = 25 °C	I_0	60	mA
Repetitive peak forward current $@f > 25$ Hz, T_{amb} = 25 °C	I_{FRM}	200	mA
Power dissipation $@T_{amb}$ = 25 °C	P_{tot}	80	mW
Junction temperature	T_j	85	°C
Storage temperature range	T_S	−55...+85	°C

Static Characteristics $@T_j$ = 25 °C

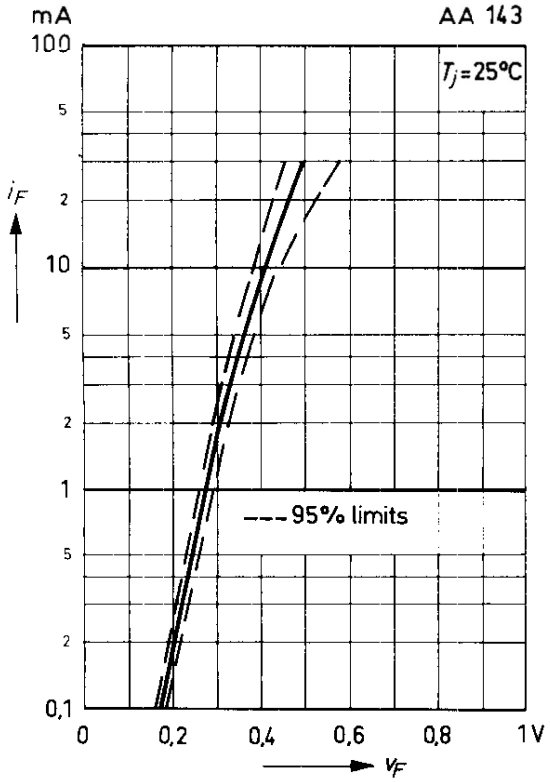
Forward voltage			
$@I_F$ = 2 mA	V_F	0.29...0.33	V
$@I_F$ = 15 mA	V_F	< 0.5	V
Leakage current			
$@V_R$ = 3 V	I_R	<4	µA
$@V_R$ = 20 V	I_R	<20	µA
Reserve breakdown voltage tested with 100 µA pulses	$V_{(BR)R}$	>25	V
Thermal resistance junction to ambient air	R_{thA}	<0.75	°C/mW

Dynamic Characteristics @T_j = 25 °C

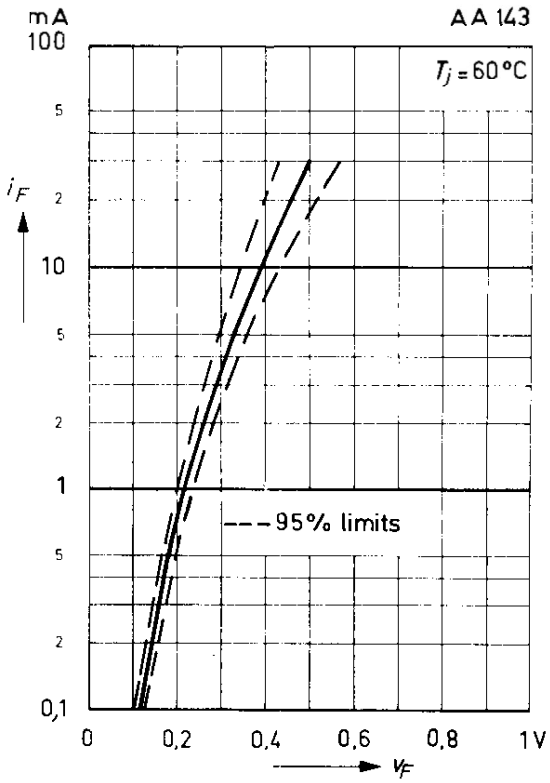
Rectification efficiency @ f = 10.7 MHz, V_{RF} = 4 V, C_L = 300 pF, R_L = 15 kΩ	η_V	75	%
Damping resistance @ f = 10.7 MHz, V_{RF} = 1 V, C_L = 300 pF, R_L = 15 kΩ	R_d	9	kΩ
Rectification efficiency @ f = 40 MHz, V_{RF} = 1 V, C_L = 10 pF, R_L = 3 kΩ	η_V	55	%
Damping resistance @ f = 40 MHz, V_{RF} = 1 V, C_L = 10 pF, R_L = 3 kΩ	R_d	3.2	kΩ
Capacitance variation if V_{RF} in the circuit below is changed so that V_0 rises from 0.75 to 3 V	ΔC	<0.18	pF



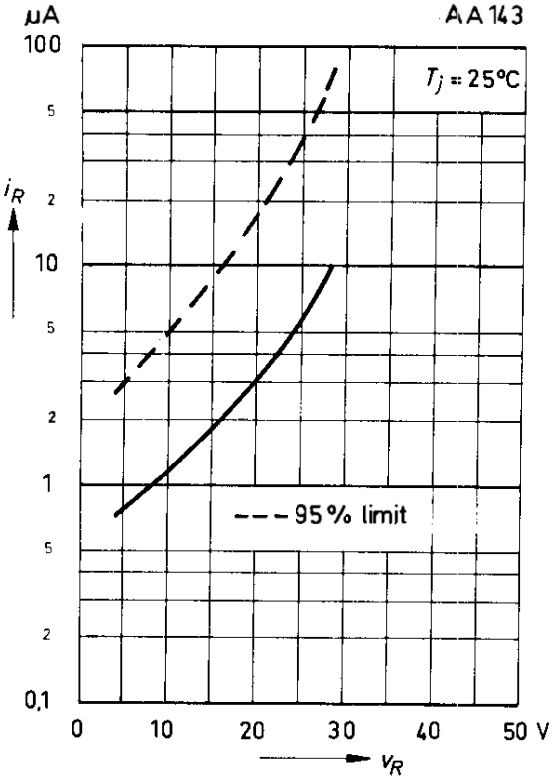
Forward characteristic
T_j = 25 °C



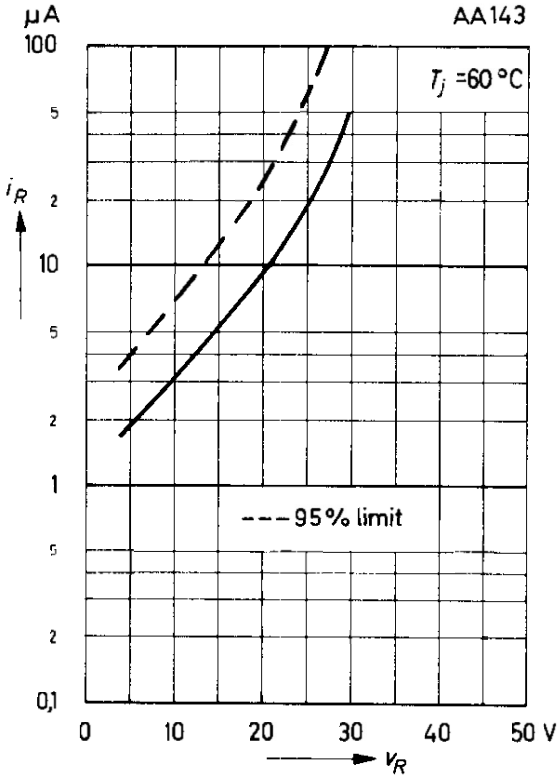
Forward characteristic
T_j = 60 °C



Reverse characteristic
T_j = 25 °C



Reverse characteristic
T_j = 60 °C

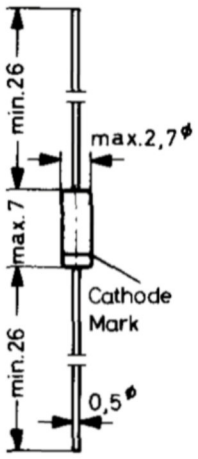


AA 143



AA 144

Germanium Gold Bonded Diode
Diode for general use, high reverse voltage



Glass case JEDEC DO-7
51 A 2 according to DIN 41880
Weight approx. 0.2 g
Dimensions in mm

Marking either by stamping AA 144
or by code rings (brown-yellow-yellow)

These diodes are delivered taped.
Details see „Taping".

Maximum Ratings

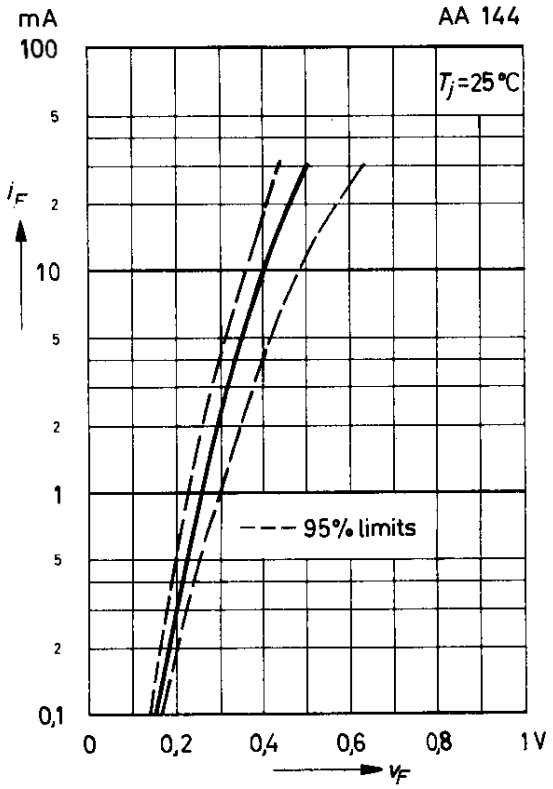
Reverse voltage	V_R	90	V
Peak reverse voltage	V_{RM}	100	V
Rectified current (average) [1] (half wave rectification) with resist. load			
@ T_{amb} = 25 °C and V_R = 0 V	I_0	45	mA
@ T_{amb} = 25 °C and V_{RM}	I_0	10	mA
Repetitive peak forward current @ f >25 Hz, T_{amb} = 25 °C	I_{FRM}	150	mA
Power dissipation @ T_{amb} = 25 °C	P_{tot}	80	mW
Junction temperature	T_j	85	°C
Storage temperature range	T_S	−55...+85	°C

Characteristics @ T_j = 25 °C

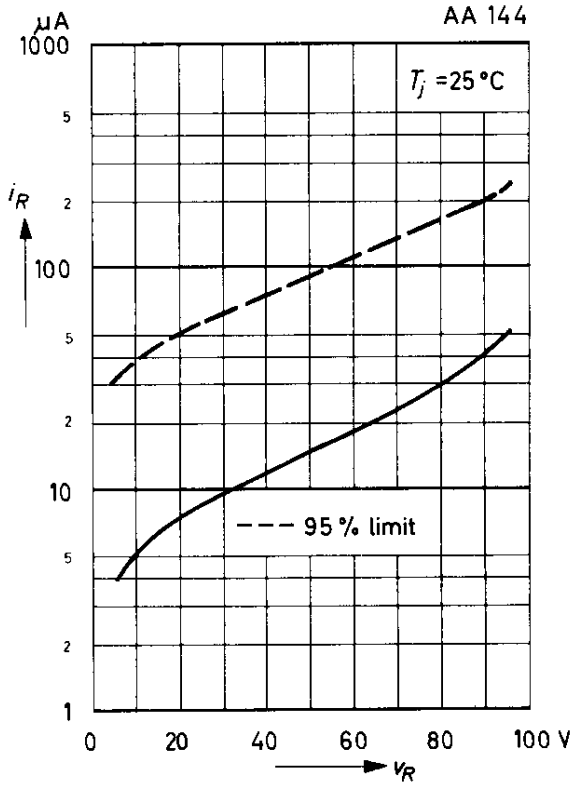
Forward voltage			
@ I_F = 1 mA	V_F	0.26	V
@ I_F = 5 mA	V_F	0.36 (<1)	V
@ I_F = 10 mA	V_F	0.4	V
Leakage current @ V_R = 75 V	I_R	25 (<200)	µA
Reverse breakdown voltage tested with 1 mA pulses	$V_{(BR)R}$	>95	V
Thermal resistance junction to ambient air	R_{thA}	<0.75	°C/mW

[1] see curve next page

Forward characteristic



Reverse characteristic



Admiss. rectif. current versus peak reverse voltage at half wave rectification and resistive load

