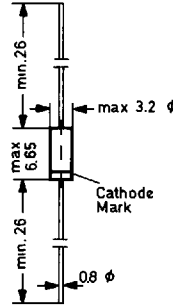


T.03-13

# BA157 ... BA159

## Fast General Purpose Silicon Rectifiers

for high speed switching applications, e. g. as clamping diode in colour TV receivers



These rectifiers are delivered taped. Details see "Taping".

Plastic case  
58 A 2 according to DIN 41 883

Weight approx. 0.4 g  
Dimensions in mm

### Absolute Maximum Ratings

	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	<b>BA157</b> <b>BA158</b> <b>BA159</b>	$V_{RRM}$	V
		400	V
		600 1000	V
Average Rectified Current at $T_{amb} = 50\text{ °C}$	$I_o$	1 <sup>1)</sup>	A
Repetitive Peak Forward Current at $f > 15\text{ Hz}$ , $T_{amb} = 25\text{ °C}$	$I_{FRM}$	9 <sup>1)</sup>	A
Surge Forward Current, Half Cycle 50 Hz, starting from $T_j = 25\text{ °C}$	$I_{FSM}$	35	A
Junction Temperature	$T_j$	150	°C
Operating and Storage Temperature Range	$T_{amb}, T_s$	-65 to +150	°C
1) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.			

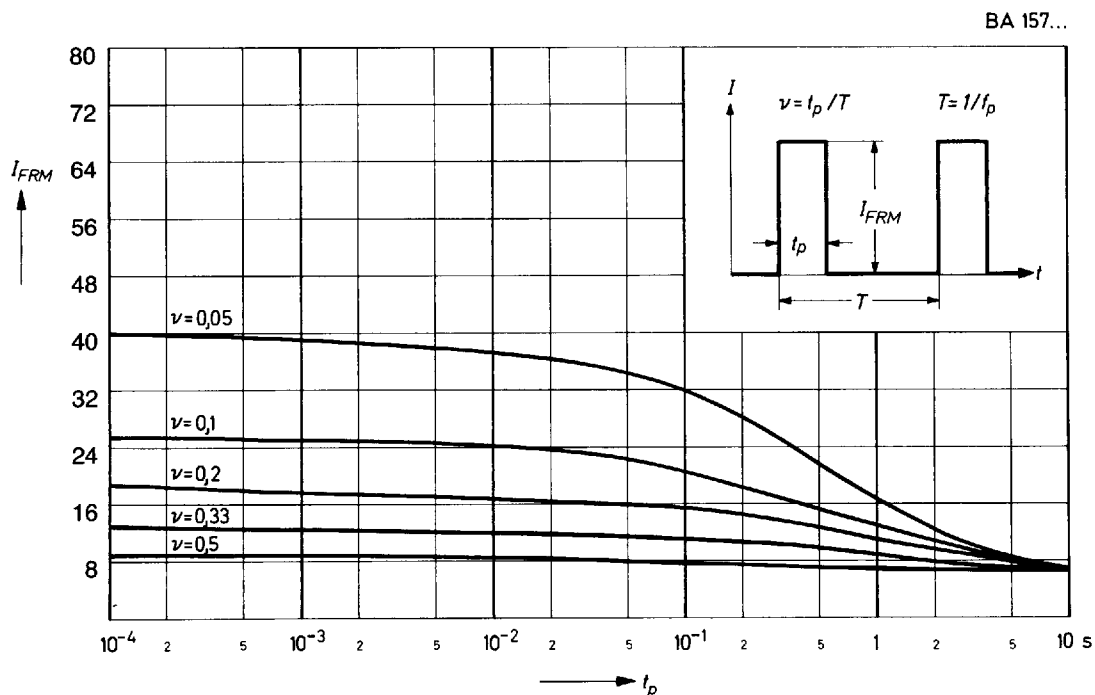
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Characteristics

	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at $I_F = 1 \text{ A}$ , $T_j = 25 \text{ }^\circ\text{C}$	$V_F$	–	–	1.3	V
Leakage Current at $V_{RRM}$ , $T_{amb} = 25 \text{ }^\circ\text{C}$	$I_R$	–	–	5	$\mu\text{A}$
Capacitance at $f = 1 \text{ MHz}$ , $V_R = 400 \text{ V}$ $V_R = 600 \text{ V}$ $V_R = 1000 \text{ V}$	<b>BA157</b> $C_{tot}$	–	2.2	–	pF
	<b>BA158</b> $C_{tot}$	–	2	–	pF
	<b>BA159</b> $C_{tot}$	–	1.8	–	pF
Reverse Recovery Time from $I_F = 10 \text{ mA}$ through $I_R = 10 \text{ mA}$ to $I_R = 1 \text{ mA}$	$t_{rr}$	–	–	300	ns
Thermal Resistance Junction to Ambient Air	$R_{thA}$	–	–	60 <sup>1)</sup>	K/W

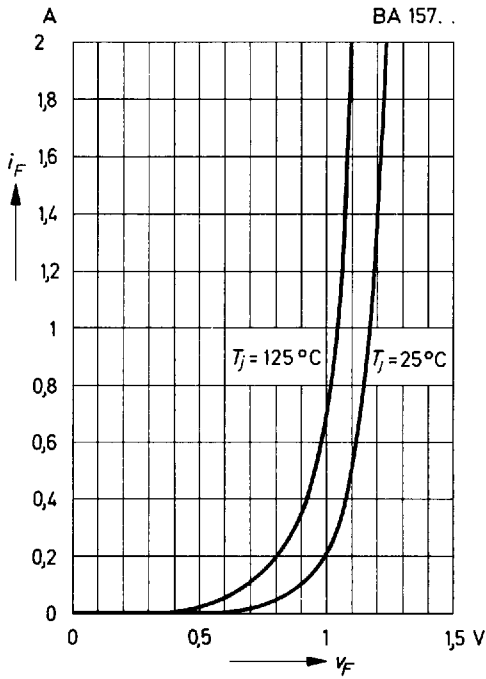
<sup>1)</sup> Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

Admissible repetitive peak forward current versus pulse duration

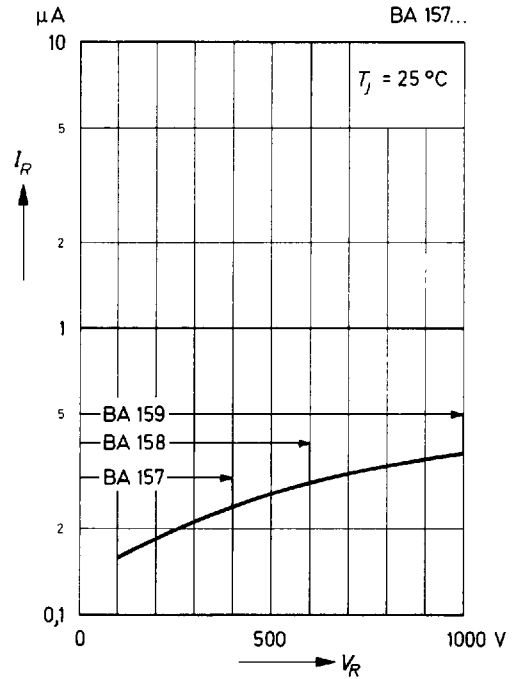


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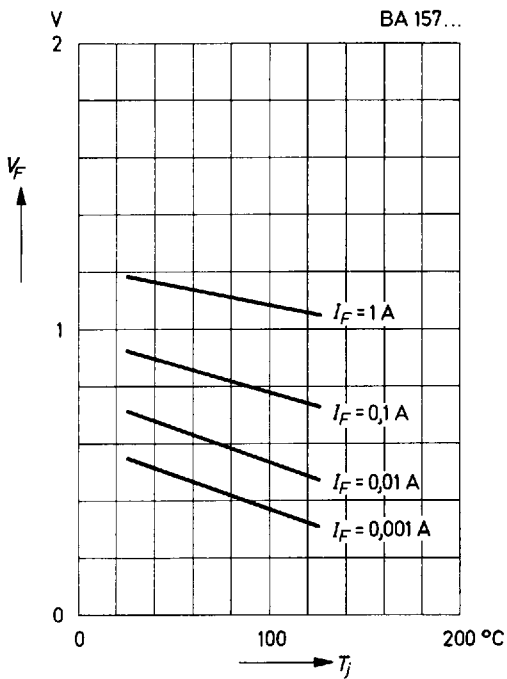
Forward characteristics



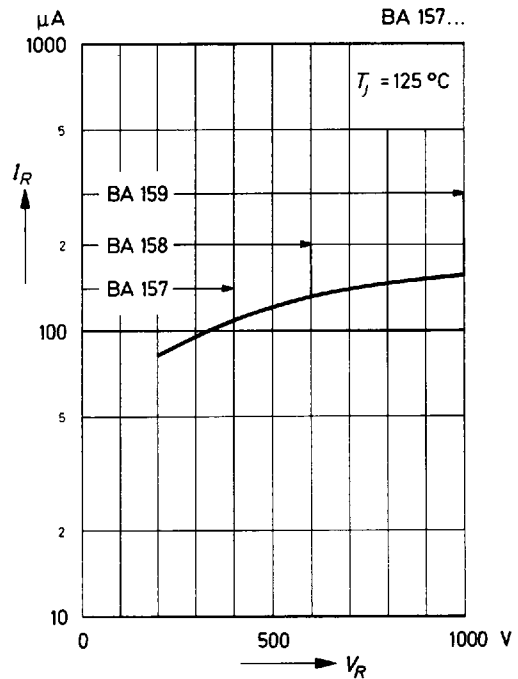
Leakage current versus reverse voltage,  $T_j = 25\text{ °C}$



Forward voltage versus junction temperature

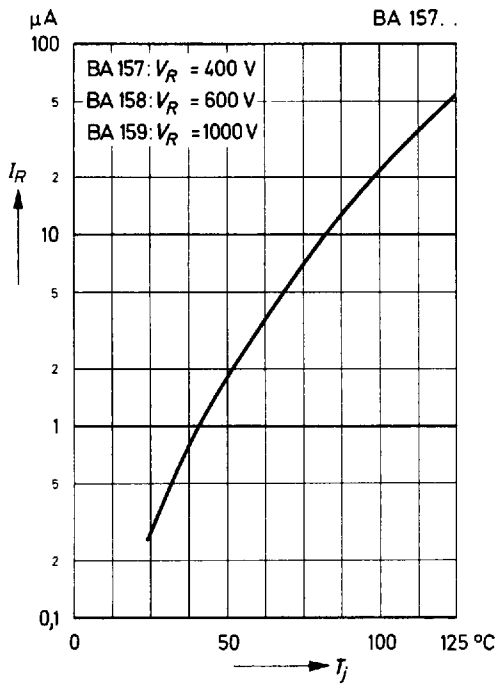


Leakage current versus reverse voltage,  $T_j = 125\text{ °C}$

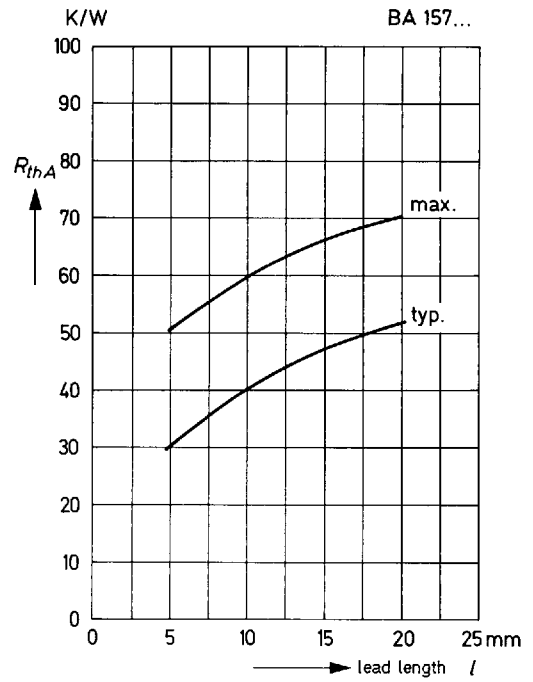


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**Leakage current versus junction temperature**



**Thermal resistance versus lead length**



**Capacitance versus reverse voltage**

