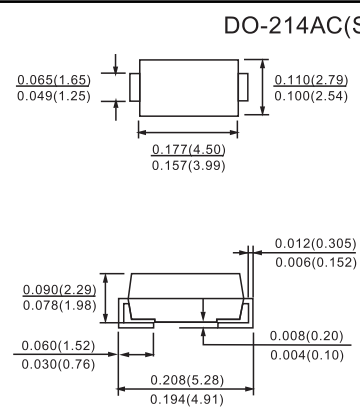


## FEATURES

- Controlled avalanche characteristics
- Glass passivated junction
- Low reverse current
- High surge current capability
- Wave and reflow solderable



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

### Absolute Maximum Ratings

Parameter	Test Conditions	Type	Symbol	Value	Unit
Reverse voltage =Repetitive peak reverse voltage		BYG10D	$V_R=V_{RRM}$	200	V
		BYG10G	$V_R=V_{RRM}$	400	V
		BYG10J	$V_R=V_{RRM}$	600	V
		BYG10K	$V_R=V_{RRM}$	800	V
		BYG10M	$V_R=V_{RRM}$	1000	V
Peak forward surge current	$t_p=10\text{ms}$ , half sinewave		$I_{FSM}$	30	A
Average forward current			$I_{FAV}$	1.5	A
Junction and storage temperature range			$T_j=T_{stg}$	-55...+150	°C
Pulse energy in avalanche mode, non repetitive (inductive load switch off)	$I_{(BR)R}=1\text{A}$ , $T_j=25^\circ\text{C}$		$E_R$	20	mJ

### Maximum Thermal Resistance

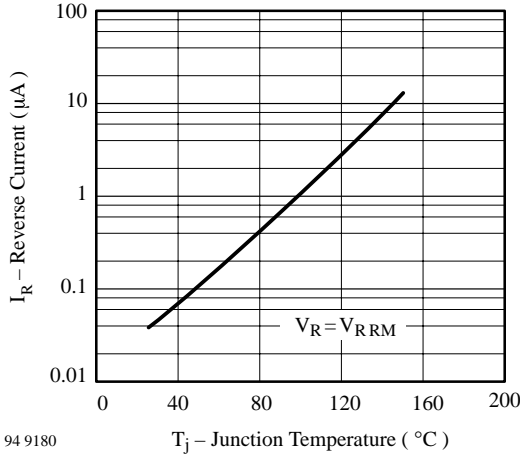
Parameter	Test Conditions	Symbol	Value	Unit
Junction lead	$T_L=\text{const.}$	$R_{thJL}$	25	K/W
Junction ambient	mounted on epoxy-glass hard tissue	$R_{thJA}$	150	K/W
	mounted on epoxy-glass hard tissue, 50mm <sup>2</sup> 35μm Cu	$R_{thJA}$	125	K/W
	mounted on Al-oxid-ceramic (Al <sub>2</sub> O <sub>3</sub> ), 50mm <sup>2</sup> 35μm Cu	$R_{thJA}$	100	K/W

### Electrical Characteristics

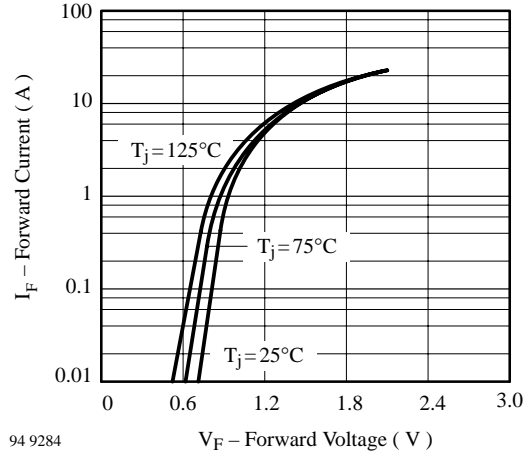
Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=1\text{A}$		$V_F$			1.1	V
	$I_F=1.5\text{A}$		$V_F$			1.15	V
Reverse current	$V_R=V_{RRM}$		$I_R$			1	μA
	$V_R=V_{RRM}$ , $T_j=100^\circ\text{C}$		$I_R$			10	μA
Reverse recovery time	$I_F=0.5\text{A}$ , $I_R=1\text{A}$ , $i_R=0.25\text{A}$		$t_{rr}$			4	μs

**RATINGS AND CHARACTERISTIC CURVES**

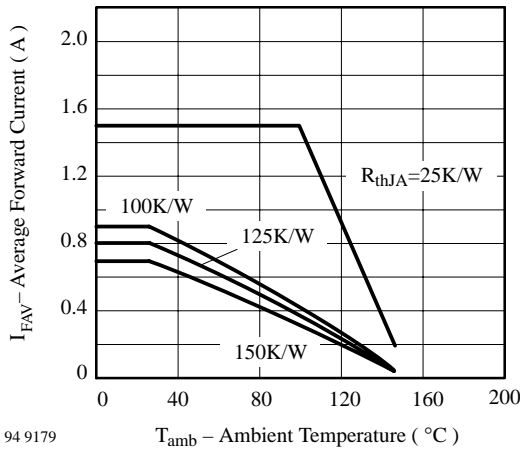
**BYG10D THRU BYG10M**



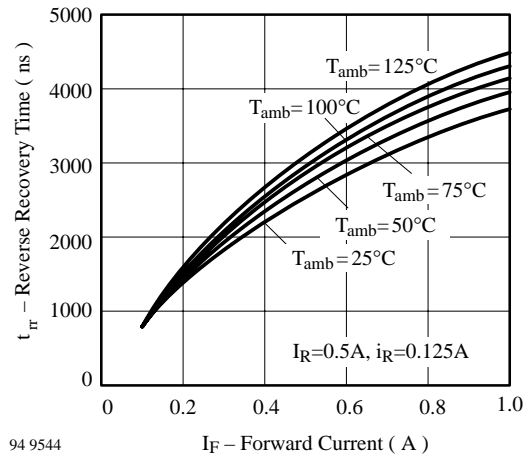
94 9180  
Figure 1. Typ. Reverse Current vs. Junction Temperature



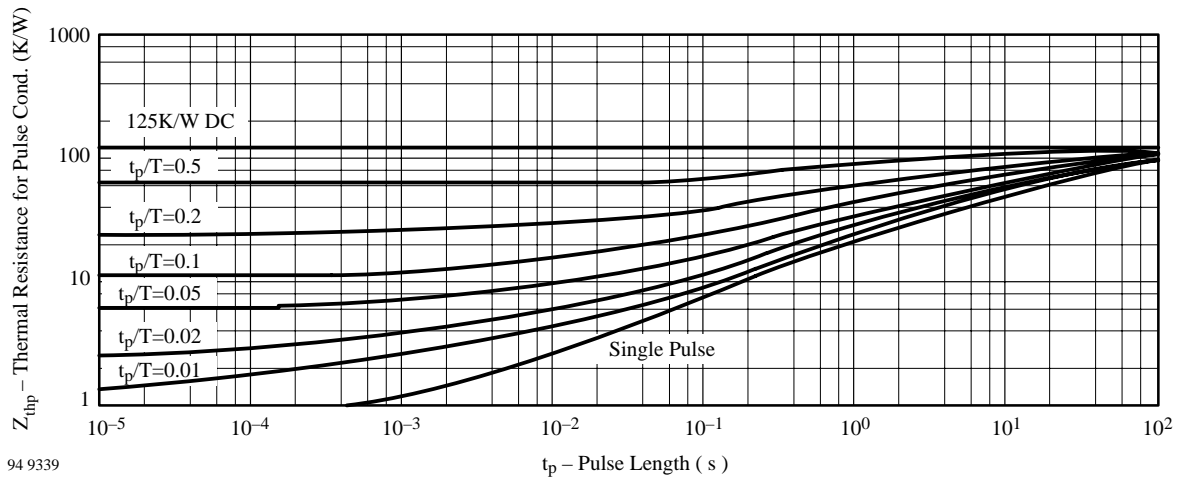
94 9284  
Figure 3. Typ. Forward Current vs. Forward Voltage



94 9179  
Figure 2. Max. Average Forward Current vs. Ambient Temperature



94 9544  
Figure 4. Typ. Reverse Recovery Time vs. Forward Current



94 9339  
Figure 5. Thermal Response