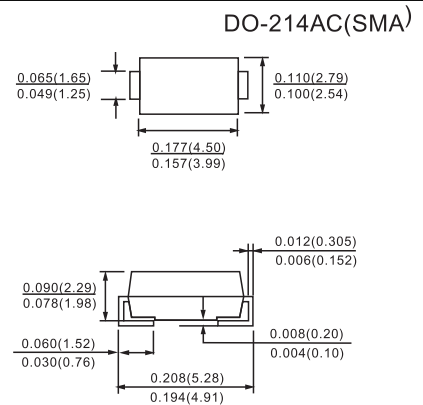


FEATURES

- 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

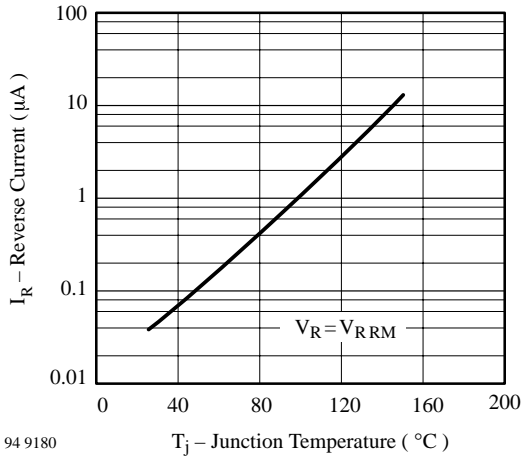
Parameter	Test Conditions	Symbol	Value	Unit
Junction lead	$T_L=\text{const.}$	R_{thJL}	25	K/W
Junction ambient	mounted on epoxy-glass hard tissue	R_{thJA}	150	K/W
	mounted on epoxy-glass hard tissue, 50mm ² 35μm Cu	R_{thJA}	125	K/W
	mounted on Al-oxid-ceramic (Al ₂ O ₃), 50mm ² 35μm Cu	R_{thJA}	100	K/W

Electrical Characteristics

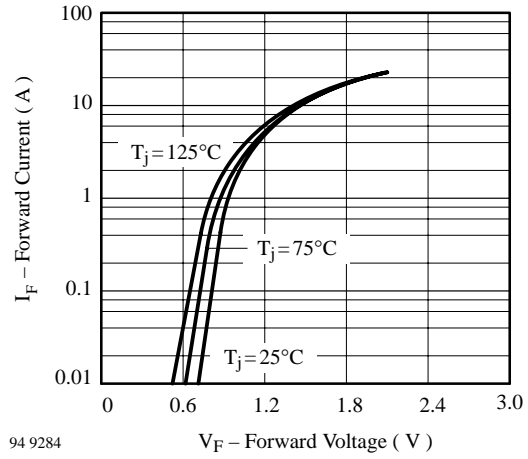
Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=1\text{A}$		V_F			1.1	V
	$I_F=1.5\text{A}$		V_F			1.15	V
Reverse current	$V_R=V_{RRM}$		I_R			1	μA
	$V_R=V_{RRM}$, $T_j=100^\circ\text{C}$		I_R			10	μA
Reverse recovery time	$I_F=0.5\text{A}$, $I_R=1\text{A}$, $i_R=0.25\text{A}$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

RATINGS AND CHARACTERISTIC CURVES

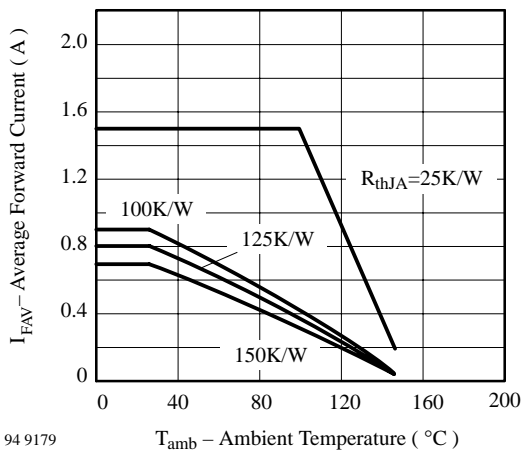
BYG10D THRU BYG10M



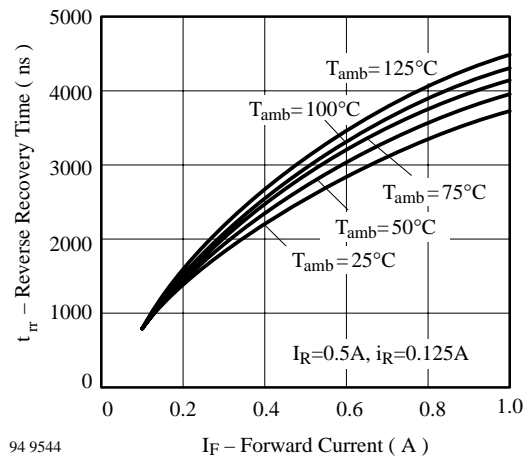
94 9180
Figure 1. Typ. Reverse Current vs. Junction Temperature



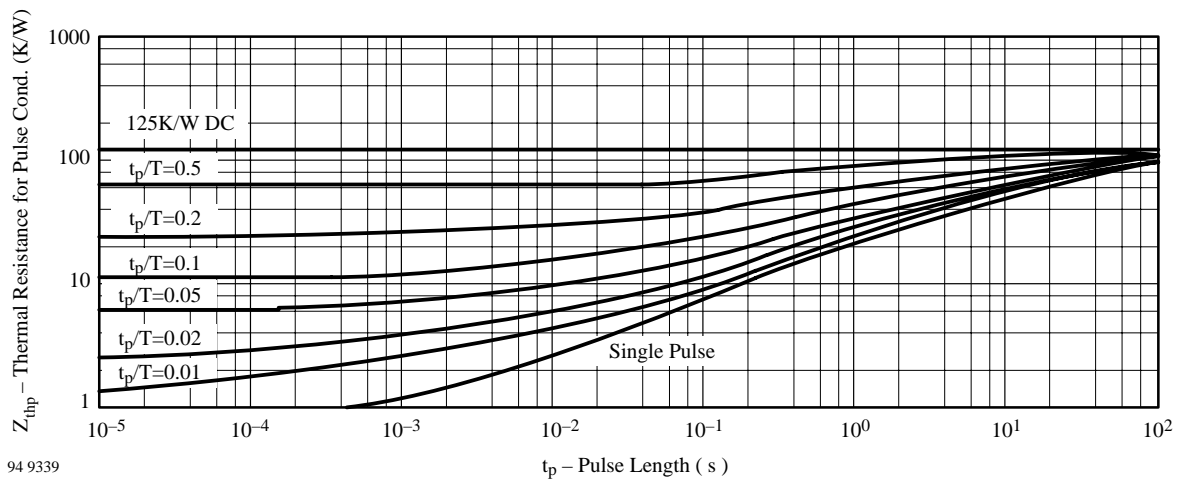
94 9284
Figure 3. Typ. Forward Current vs. Forward Voltage



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