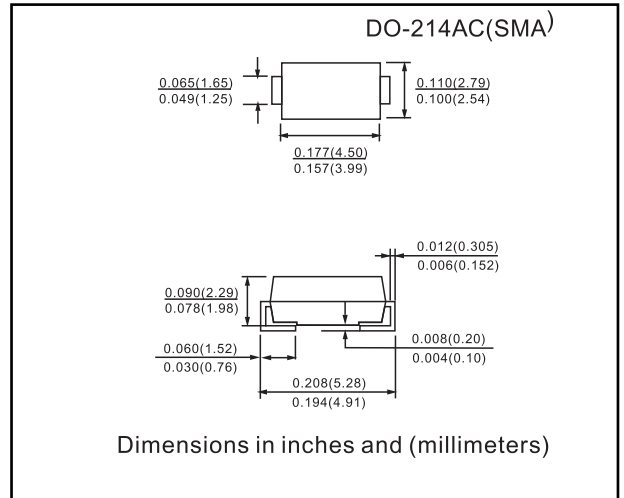




**FEATURES**

- 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	$t_p=10ms$ , 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)	$I_{(BR)R}=1A$ , $T_j=25^\circ C$		$E_R$	20	mJ

**Maximum Thermal Resistance**

Parameter	Test Conditions	Symbol	Value	Unit
Junction lead	$T_L=const.$	$R_{thJL}$	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	$I_F=1A$		$V_F$			1.1	V
	$I_F=1.5A$		$V_F$			1.15	V
Reverse current	$V_R=V_{RRM}$		$I_R$			1	μA
	$V_R=V_{RRM}$ , $T_j=100^\circ C$		$I_R$			10	μA
Reverse recovery time	$I_F=0.5A$ , $I_R=1A$ , $i_R=0.25A$		$t_{rr}$			4	μs



RATINGS AND CHARACTERISTIC CURVES

BYG10D THRU BYG10M

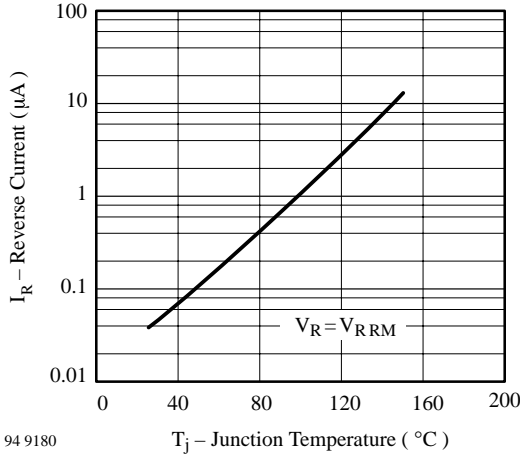


Figure 1. Typ. Reverse Current vs. Junction Temperature

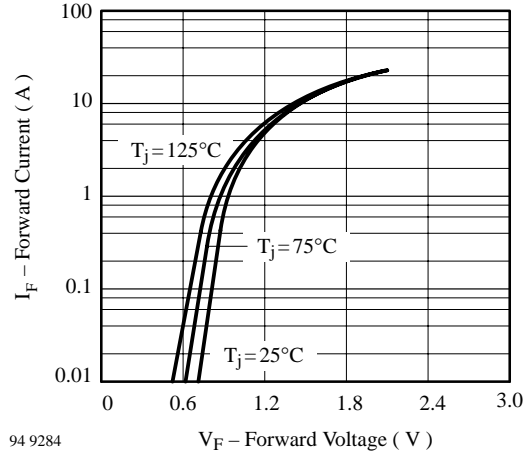


Figure 3. Typ. Forward Current vs. Forward Voltage

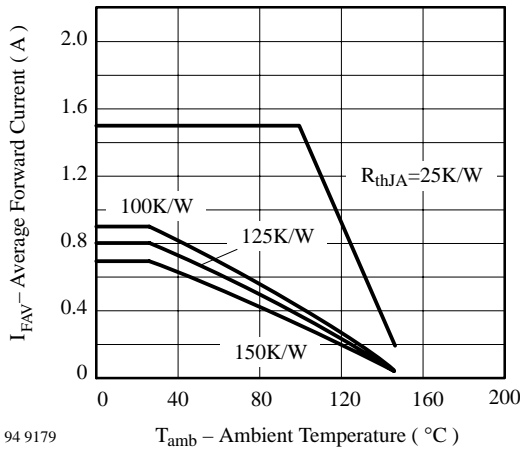


Figure 2. Max. Average Forward Current vs. Ambient Temperature

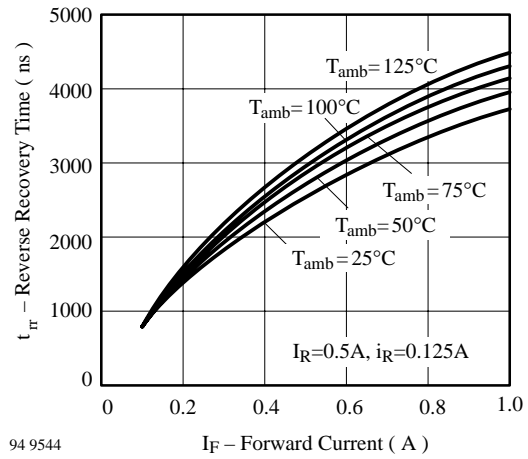


Figure 4. Typ. Reverse Recovery Time vs. Forward Current

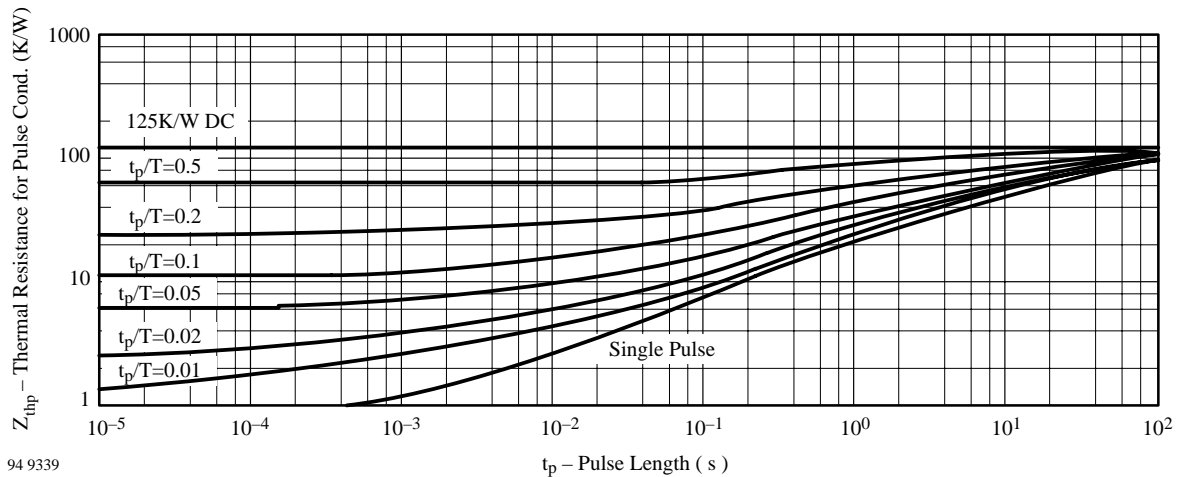


Figure 5. Thermal Response