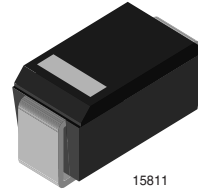


## Fast Avalanche SMD Rectifier

### Features

- Glass passivated junction
- Low reverse current
- Soft recovery characteristics
- Fast reverse recovery time
- Wave and reflow solderable



15811

### Applications

Freewheeling diodes in SMPS and converters  
 Snubber diodes

### Parts Table

Part	Type differentiation	Package
BYG 24 D	$V_R = 200 \text{ V @ } I_{FAV} = 1.5 \text{ A}$	DO-214AC
BYG 24 G	$V_R = 400 \text{ V @ } I_{FAV} = 1.5 \text{ A}$	DO-214AC
BYG 24 J	$V_R = 600 \text{ V @ } I_{FAV} = 1.5 \text{ A}$	DO-214AC

### Absolute Maximum Ratings

$T_{amb} = 25 \text{ }^\circ\text{C}$ , unless otherwise specified

Parameter	Test condition	Part	Symbol	Value	Unit
Reverse voltage = Repetitive peak reverse voltage		BYG 24 D	$V_R = V_{RRM}$	200	V
		BYG 24 G	$V_R = V_{RRM}$	400	V
		BYG 24 J	$V_R = V_{RRM}$	600	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 to + 150	$^\circ\text{C}$
Pulse energy in avalanche mode, non repetitive (inductive load switch off)	$I_{(BR)R} = 1 \text{ A}$ , $T_j = 25 \text{ }^\circ\text{C}$		$E_R$	20	mJ

### Maximum Thermal Resistance

$T_{amb} = 25 \text{ }^\circ\text{C}$ , unless otherwise specified

Parameter	Test condition	Part	Symbol	Value	Unit
Junction case			$R_{thJC}$	25	K/W
Junction ambient	epoxy glass hard tissue $35 \mu\text{m}^*$ 17 mm <sup>2</sup> cooper area per electrode		$R_{thJA}$	150	K/W
	epoxy glass hard tissue 35 &mu;Mm * 50 mm <sup>2</sup> cooper area per electrode		$R_{thJA}$	125	K/W

### Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Part	Symbol	Min	Typ.	Max	Unit
Forward voltage	$I_F = 1\text{ A}$		$V_F$			1.15	V
	$I_F = 1.5\text{ A}$		$V_F$			1.25	V
Reverse current	$V_R = V_{RRM}$		$I_R$			1	$\mu\text{A}$
	$V_R = V_{RRM}, T_j = 100\text{ }^{\circ}\text{C}$		$I_R$			10	$\mu\text{A}$
Breakdown voltage	$I_R = 100\text{ }\mu\text{A}$	BYG 24 D	$V_{(BR)R}$	200			V
		BYG 24 G	$V_{(BR)R}$	400			V
		BYG 24 J	$V_{(BR)R}$	600			V
Reverse recovery time	$I_F = 0.5\text{ A}; I_R = 1\text{ A}; i_R = 0.25\text{ A}$		$t_{rr}$			140	ns

### Typical Characteristics ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

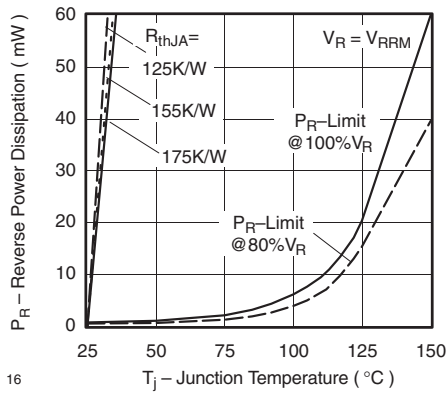


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

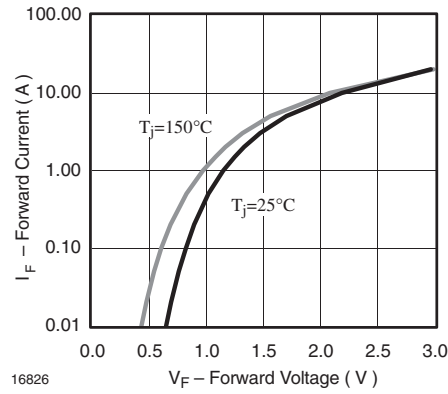


Figure 3. Forward Current vs. Forward Voltage

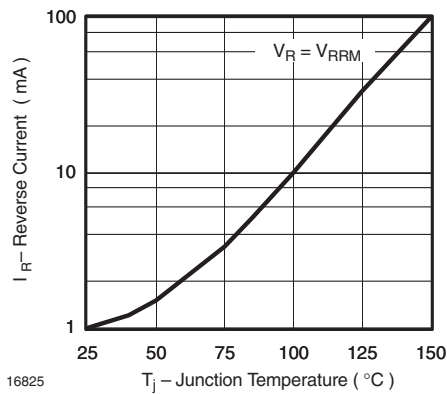


Figure 2. Reverse Current vs. Junction Temperature

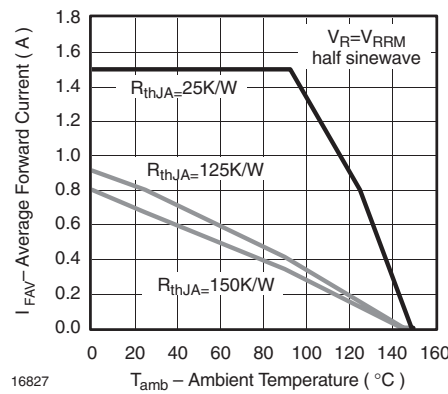


Figure 4. Average Forward Current vs. Ambient Temperature

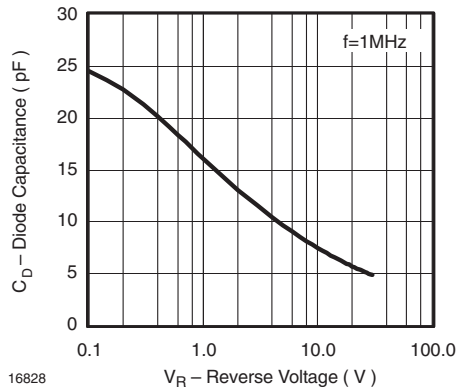
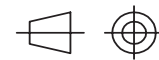
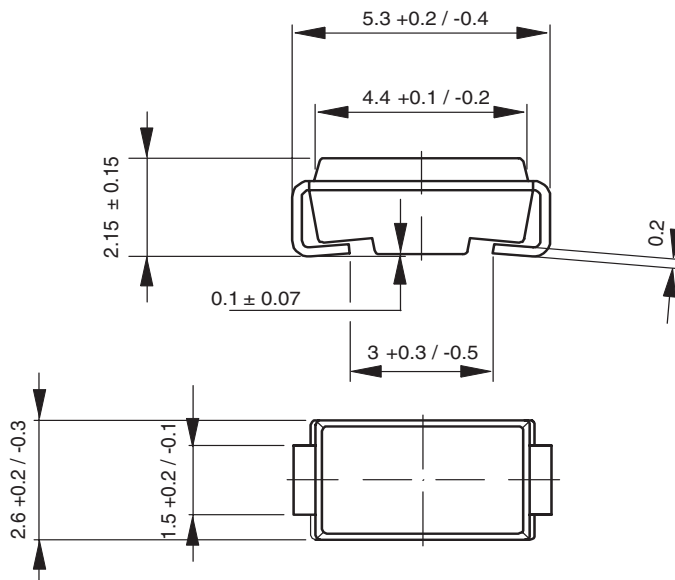


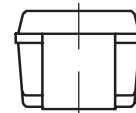
Figure 5. Diode Capacitance vs. Reverse Voltage

## Dimensions in inches (millimeters)



ISO Method E

technical drawings according to DIN specifications



Plastic case JEDEC DO 214 similar to SMA  
Cathode indicated by a band

14275-1