

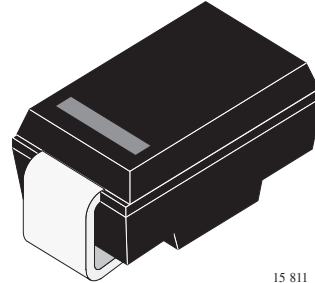
Fast Avalanche SMD Rectifier

Features

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

Applications

Freewheeling diodes in SMPS and converters
Snubber diodes



15 811

Order Information

Part Number	Part Differentiation
BYG 24 D	$V_R = 200 \text{ V @ } I_{FAV} = 1.5 \text{ A}$
BYG 24 G	$V_R = 400 \text{ V @ } I_{FAV} = 1.5 \text{ A}$
BYG 24 J	$V_R = 600 \text{ V @ } I_{FAV} = 1.5 \text{ A}$

Absolute Maximum Ratings

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

Parameter	Test condition	Sub type	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

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

Parameter	Test condition	Sub type	Symbol	Value	Unit
Junction case			R_{thJC}	25	K/W
Junction ambient	epoxy glass hard tissue $35 \mu\text{m} \times 17 \text{ mm}^2$ cooper area per electrode		R_{thJA}	150	K/W
	epoxy glass hard tissue $35 \mu\text{m} \times 50 \text{ mm}^2$ cooper area per electrode		R_{thJA}	125	K/W

Electrical Characteristics

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

Parameter	Test condition	Sub type	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

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

Charateristics ($T_j = 25^\circ C$ unless otherwise specified)

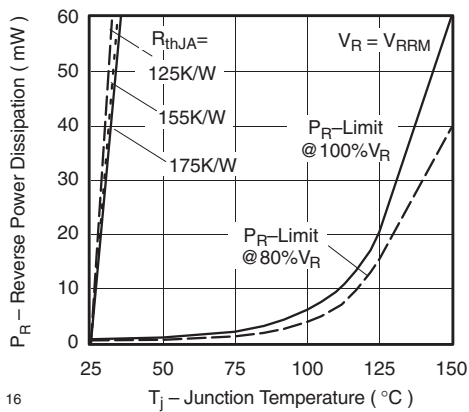


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

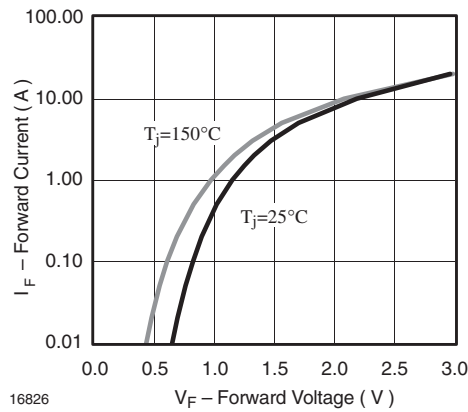


Figure 3. Forward Current vs. Forward Voltage

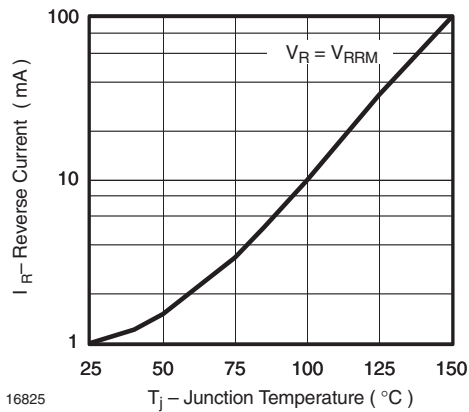


Figure 2. Reverse Current vs. Junction Temperature

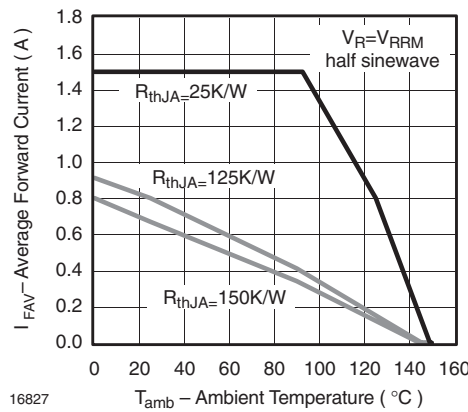


Figure 4. Average Forward Current vs. Ambient Temperature

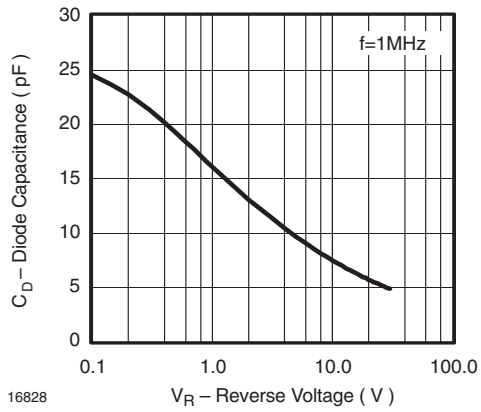
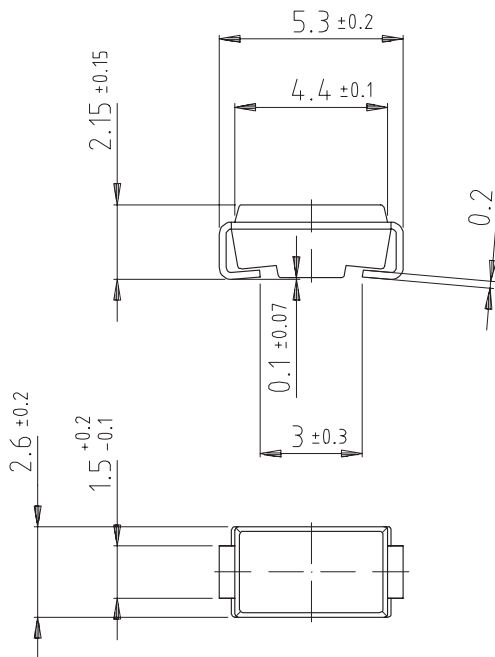
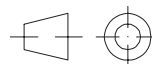


Figure 5. Diode Capacitance vs. Reverse Voltage

Dimensions in mm



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



technical drawings
according to DIN
specifications

14275