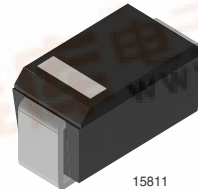




Fast Avalanche SMD Rectifier

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

$T_{amb} = 25^\circ\text{C}$, 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)	$I_{(BR)R} = 1 \text{ A}$, $T_j = 25^\circ\text{C}$		E_R	20	mJ

Maximum Thermal Resistance

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

Parameter	Test condition	Part	Symbol	Value	Unit
Junction case			R_{thJC}	25	K/W
Junction ambient	epoxy glass hard tissue 35 μm * 17 mm ² cooper area per electrode		R_{thJA}	150	K/W
	epoxy glass hard tissue 35 μm * 50 mm ² 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	μA
	$V_R = V_{RRM}$, $T_J = 100\text{ }^{\circ}\text{C}$		I_R			10	μA
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)

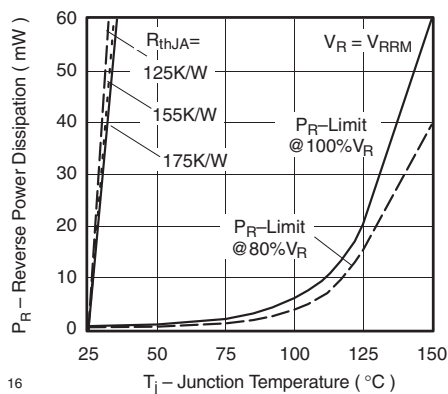


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

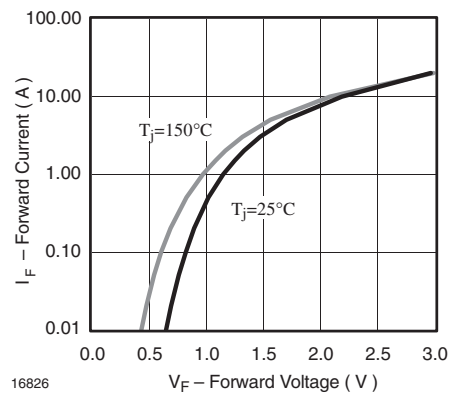


Figure 3. Forward Current vs. Forward Voltage

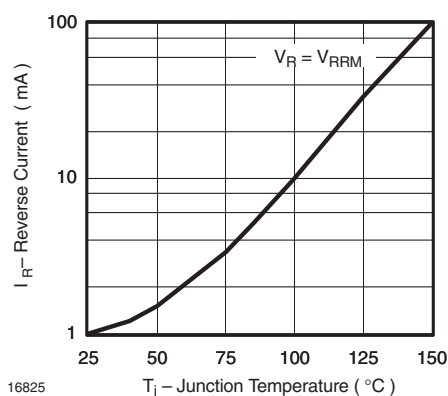


Figure 2. Reverse Current vs. Junction Temperature

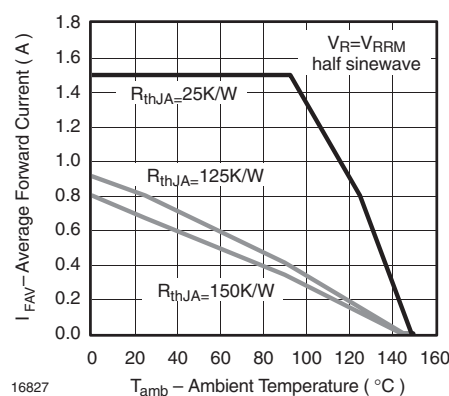


Figure 4. Average Forward Current vs. Ambient Temperature

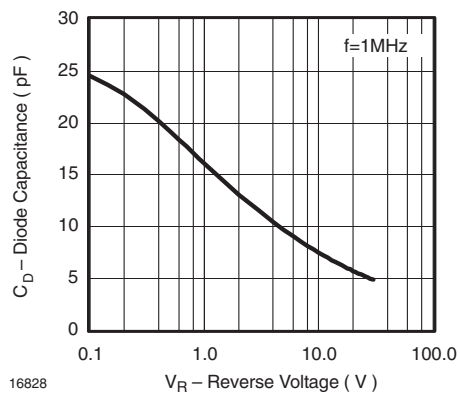
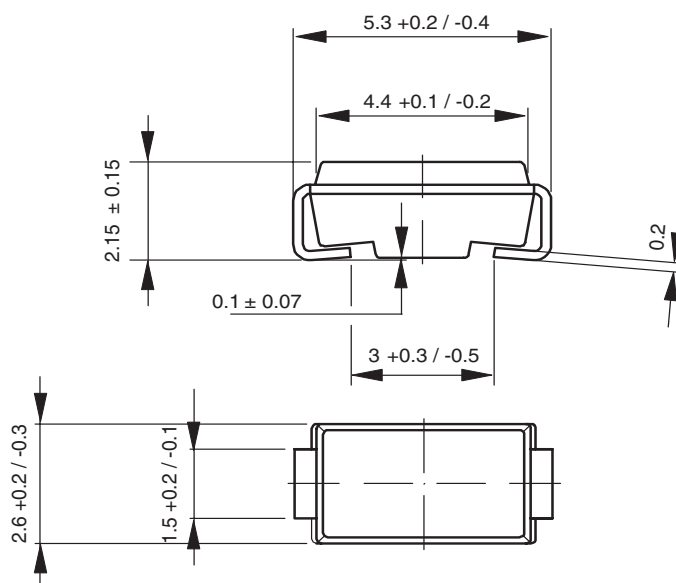


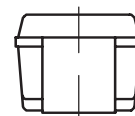
Figure 5. Diode Capacitance vs. Reverse Voltage

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