



## BYV26EAGP

### PLASTIC HIGH-EFFICIENCY RECTIFIERS



VOLTAGE: 1000 Volts

CURRENT: 1 Amperes

Package: DO-15

Marking And Polarity

#### FEATURES

- Plane Schottky Potential Barrier Chip
- Low Forward Voltage Drop For High Efficiency
- Low Leakage Current For High Reliability
- High Forward Surge Capability For High Reliability
- High Frequency Operation

#### MECHANICAL DATA

- Package:** Molding Compound Meets UL 94 V-0 Flammability Rating, RoHS-Compliant
- Polarity:** As Marked On Case
- Mounting Position:** Any
- Weight:** App. 0.306 Grams (0.010791 Ounce)

#### TYPICAL APPLICATIONS

- For Use In High Frequency Inverters, Switching Mode Power Supply  
AC/DC Converters, LED Driver Etc. Applications



Remark:

- NH=niuhan trademark
- FF=Product line code, According to actual changes
- BYV26EAGP=Model
- White band denotes cathode

Single Phase, Half Wave, 60Hz, Resistive Or Inductive Load. For Capacitive Load, Derate Current By 20%

#### Maximum Ratings (Ta=25°C Unless otherwise specified)

Parameter	Test Conditions	Symbol	BYV26EAGP	Unit
Maximum Repetitive Peak Reverse Voltage		$V_{RRM}$	1000	V
Maximum RMS Voltage		$V_{RMS}$	700	V
Maximum DC Blocking Voltage		$V_{DC}$	1000	V
Maximum Average Forward Rectified Current	@TC= 100 °C	$I_{F(AV)}$	1	A
Peak Forward Surge Current	8.3ms Single Half Sine-wave Superimposed On Rate Load	$I_{FSM}$	30	A
Current Squared Time Per Diode	t<8.3ms	$I^2t$	3.7	A <sup>2</sup> sec

#### Electrical Characteristics (Ta=25°C Unless otherwise specified)

Parameter	Test Conditions		Symbol	BYV26EAGP			Unit
				Min.	Typ.	Max.	
Instantaneous forward voltage per diode (note1)	Ta=25°C	$I_F = 1.0 A$	$V_F$	--	1.40	2.00	V
	Ta=125°C			--	1.30	1.90	
Maximum DC Reverse Current at Rated DC Blocking Voltage (Note 1)	Ta=25°C	$V_R = V_{RRM}$	$I_{RRM}$	--	1	5	uA
	Ta=125°C	$V_R = 80% \cdot V_{RRM}$		--	100	500	
Typical Junction Capacitance Per Diode	4.0 V, 1MHz		$C_J$	--	15	--	pF
Maximum Reverse Recovery Time	$I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$		$T_{RR}$	--	--	50	nS

#### Thermal Characteristics (Ta=25°C Unless otherwise specified)

Parameter	Symbol	BYV26EAGP	Unit
Operating Junction Temperature Range	$T_J$	-55 to 150	°C
Storage Temperature Range	$T_{STD}$	-55 to 150	
Typical thermal resistance (Note 2)	$R_{\theta JA}$	65	°C/W
	$R_{\theta JC}$	16	

Notes: 1. Pulse Test: 300 Us Pulse Width, 2% Duty Cycle

2. Thermal Resistance from Junction to Ambient at 3/8" lead length, P.C. Board Mounted

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Typical Characteristics Curves

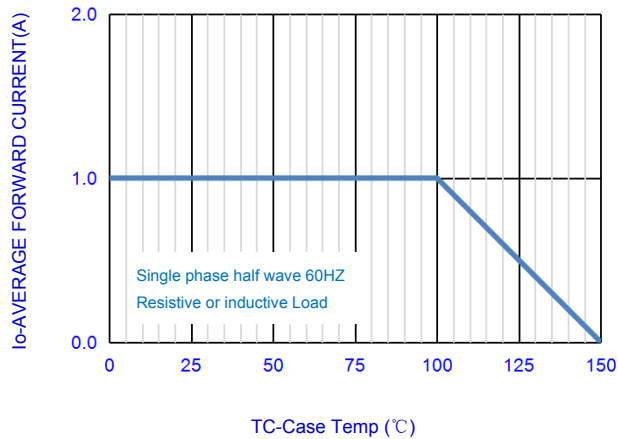


Fig.1-FORWARD CURRENT DERATING CURVE

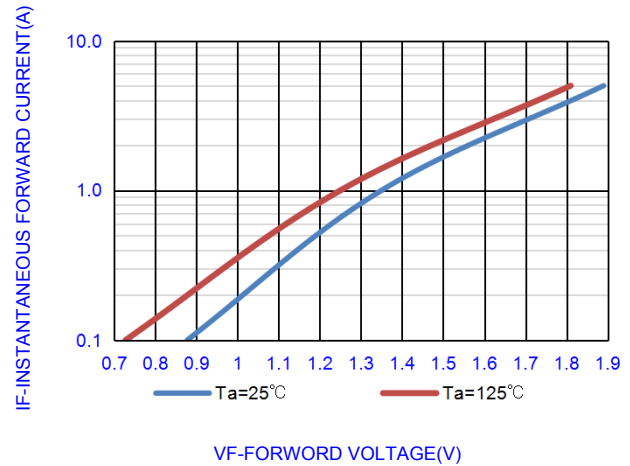


Fig.2- TYPICAL INSTANTANEOUS FORWARD

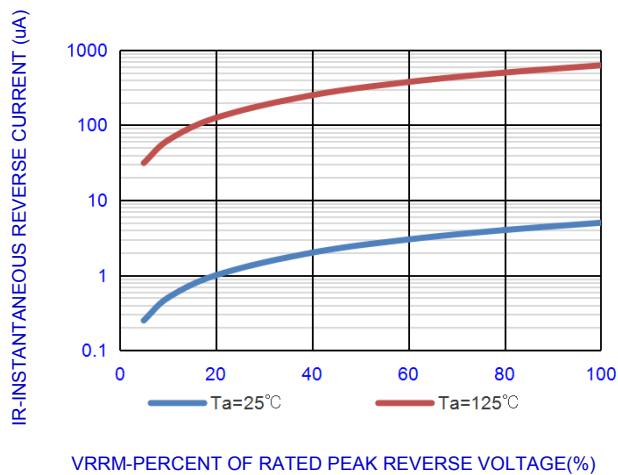


Fig.3- TYPICAL REVERSE CHARACTERISTICS

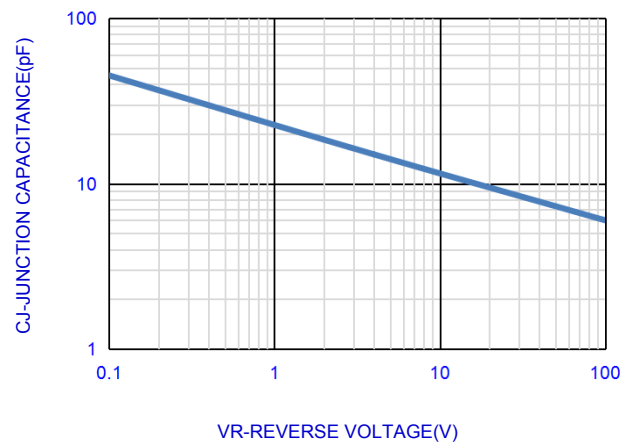


Fig.4- TYPICAL JUNCTION CAPACITANCE

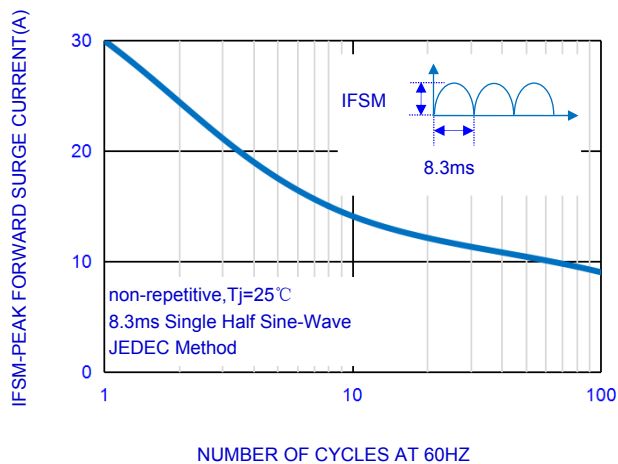


Fig.5-MAX. NON-REPETITIVE SURGE CURRENT

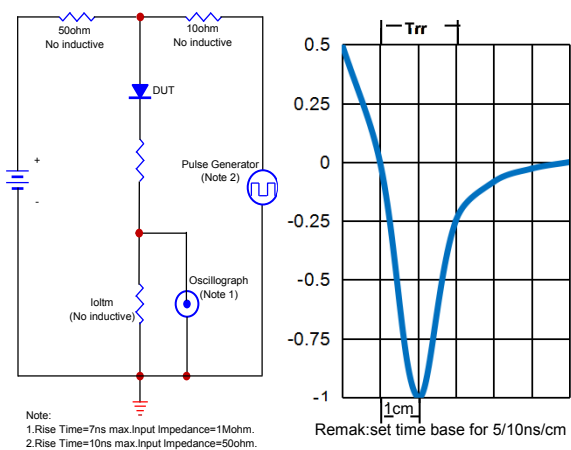


Fig.6-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT

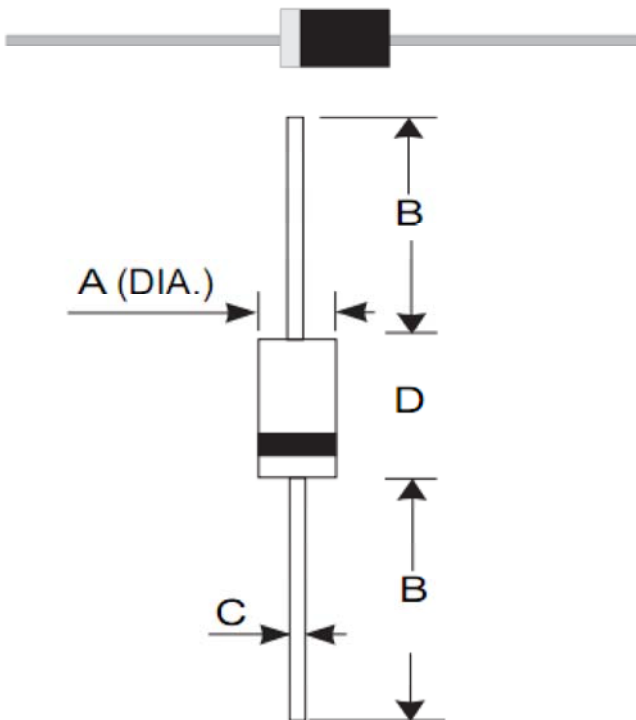
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OUTLINE DRAWINGS

DO-15



OUTLINE DIMENSIONS

Dim.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.6	-	3.6	0.104	-	0.140
B	24.0	-	27.0	0.945	-	1.063
C	0.7	-	0.9	0.028	-	0.035
D	5.8	-	7.6	0.230	-	0.300

PACKING INFORMATION

Package Code	Package Method	Inner Box Size L×W×H(mm)	Quantity (Pcs/Inner Box)	Outer Carton Size L×W×H(mm)	Quantity (Pcs/Carton)
DO-15	Braided/boxed	250x75x140	3000	420x280x310	30000

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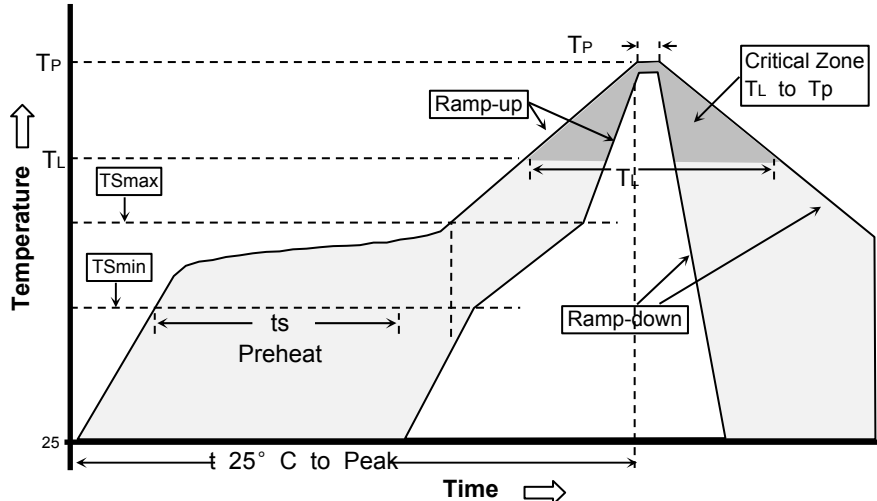
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**Recommended wave soldering condition**

Product	Peak Temperature	Soldering Time
Pb-free devices	260 +0/-5 °C	5 +1/-1 seconds

**Recommended temperature profile for IR reflow**



Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (Tsmax to Tp)	3°C/second max.	3°C/second max.
Preheat -Temperature Min(TS min) -Temperature Max(TS max) -Time(ts min to ts max)	100°C 150°C 60-120 seconds	150°C 200°C 60-180 seconds
Time maintained above: -Temperature (TL) - Time (tL)	183°C 60-150 seconds	217°C 60-150 seconds
Peak Temperature(TP)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	10-30 seconds	20-40 seconds
Ramp down rate	6°C/second max.	6°C/second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.



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