



# **Fast Recovery Rectifiers**

#### **FEATURES**

- High efficiency, Low VF
- High current capability
- High reliability
- High surge current capability
- Low power loss
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



DO-204AL (DO-41)





## MECHANICAL DATA Case: DO-204AL (DO-41)

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Weight: 0.3 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHAR	ACTERSTIC	CS (T <sub>A</sub> =25°C ur	nless otherwise	noted)	
PARAMETER	SYMBOL	BA157	BA158	BA159	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	400	600	1000	V
Maximum RMS voltage	$V_{RMS}$	280	420	700	V
Maximum DC blocking voltage	$V_{DC}$	400	600	1000	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	1.0		Α	
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	30		А	
Maximum instantaneous forward voltage (Note 1) @ 1 A	V <sub>F</sub>	1.2		V	
Maximum reverse current @ rated VR T <sub>J</sub> =25 °C T <sub>J</sub> =125 °C	I <sub>R</sub>	5 150		μА	
Maximum reverse recovery time (Note 2)	Trr	15	50	250	ns
Typical junction capacitance (Note 3)	Cj	10		pF	
Typical thermal resistance	$R_{\theta JA}$	65		°C/W	
Operating junction temperature range	T <sub>J</sub>	- 55 to +150		οС	
Storage temperature range	T <sub>STG</sub>	- 55 to +150		οС	

Note1: Pulse Test with PW=300µs, 1% Duty Cycle

Note2: Reverse Recovery Test Conditions:  $I_F$ =0.5A,  $I_R$ =1.0A,  $I_{RR}$ =0.25A

Note3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.



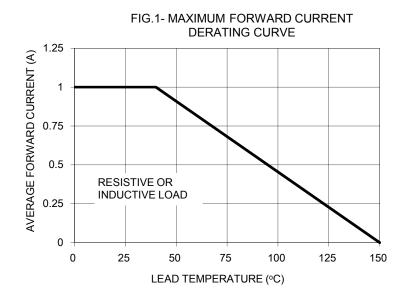
ORDERING INFORMATION				
PART NO.	PACKING CODE	GREEN COMPOUND	PACKAGE	PACKING
		CODE		
BA15x R0 (Note 1) R1 B0	A0		DO-41	3,000 / Ammo box (52mm taping)
	Suffix "G"	DO-41	5,000 / 13" Paper reel	
	R1	Sullix G	DO-41	5,000 / 13" Paper reel (Reverse)
	В0		DO-41	1,000 / Bulk packing

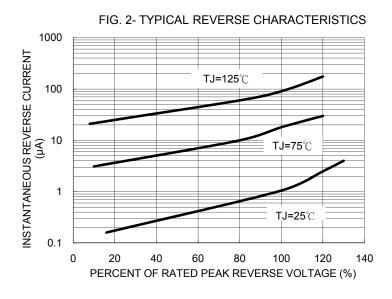
Note 1: "x" defines voltage from 400V (BA157) to 1000V (BA159)

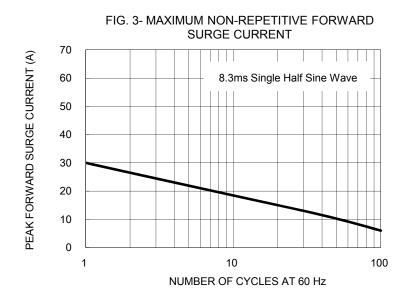
EXAMPLE					
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION	
BA157 A0	BA157	A0			
BA157 A0G	BA157	A0	G	Green compound	

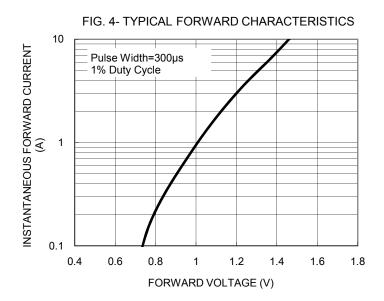
#### RATINGS AND CHARACTERISTICS CURVES

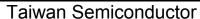
(TA=25°C unless otherwise noted)



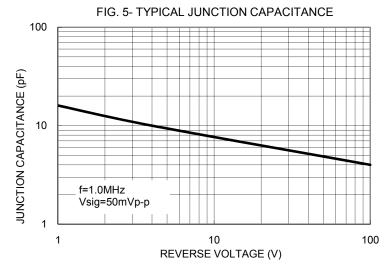




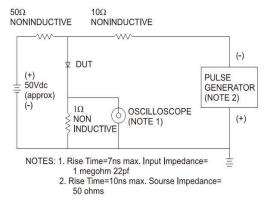


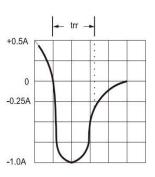




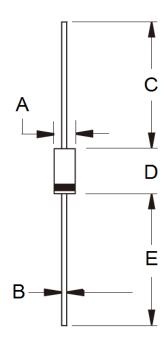


#### FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





### PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)		
Dilvi.	Min	Max	Min	Max	
Α	2.00	2.70	0.079	0.106	
В	0.71	0.86	0.028	0.034	
С	25.40	-	1.000	-	
D	4.20	5.20	0.165	0.205	
Е	25.40	-	1.000	-	

#### MARKING DIAGRAM



P/N = Specific Device Code G = Green Compound

YWW = Date Code F = Factory Code



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