

UGP20A thru UGP20K

Glass Passivated Junction Ultra Fast Rectifiers
Reverse Voltage 50 to 800V Forward Current 2.0A

FEATURES

- * Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- * Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- * Ultrafast recovery time for high efficiency
- * Excellent high temperature switching
- * Soft recovery characteristics
- * Cavity-free glass passivated junction
- * High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-15, molded plastic over glass DIE

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.015oz., 0.40 g

Handling precaution: None

1. Electrical Characteristic

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	UGP20 A	UGP20 B	UGP20 D	UGP20 F	UGP20 G	UGP20 J	UGP20 K	Unit
device marking code		UGP20 A	UGP20 B	UGP20 D	UGP20 F	UGP20 G	UGP20 J	UGP20 K	
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	300	400	600	800	V
Maximum RMS voltage	V _{RMS}	35	70	140	210	280	420	560	V
Maximum DC blocking voltage	V _{DC}	50	100	200	300	400	600	800	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T _A =55°C	IF(AV)	2.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	65					60		A
Maximum full load reverse current, full cycle average,0.375"(9.5mm) lead lengths at T _A = 55°C	IR(AV)	100							μA
Typical thermal resistance (Note 2)	RθJA	40							°C/W
Operating junction and storage temperature range	TJ, TSTG	-50 to +150							°C

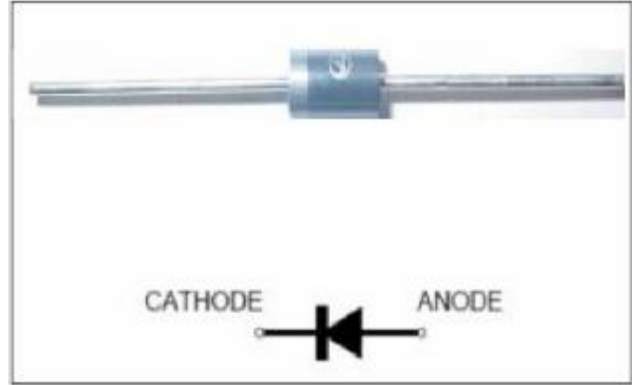
Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	UGP20 A	UGP20 B	UGP20 D	UGP20 F	UGP20 G	UGP20 J	UGP20 K	Unit
Maximum instantaneous forward voltage at 2.0A	V _F	0.95			1.25		1.70	2.20	V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TA = 125°C	IR	10 100							μA
Typical reverse recovery time (Note 1)	trr	35							ns
Typical junction capacitance at 4.0V, 1MHz	CJ	22							PF

NOTES:

1. $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $IRR = 0.25\text{A}$

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



We declare that the material of product
compliance with ROHS requirements

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2. Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

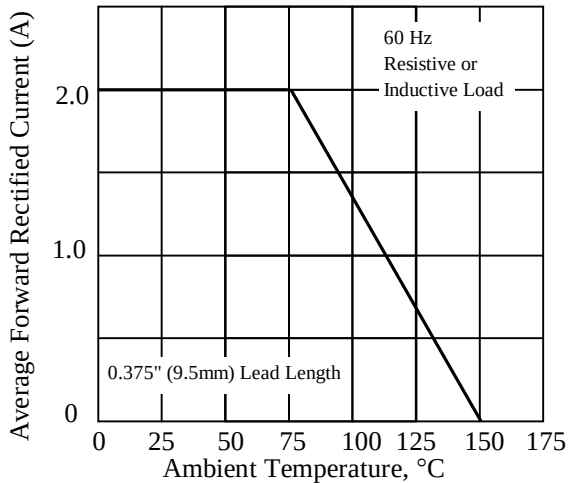


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

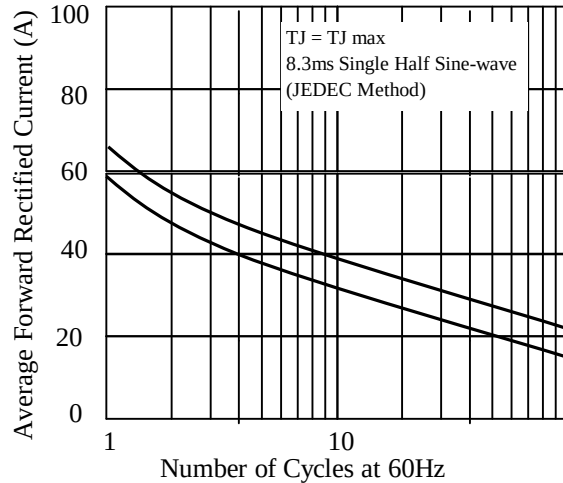


Fig 3. - Typical Instantaneous Forward Characteristics

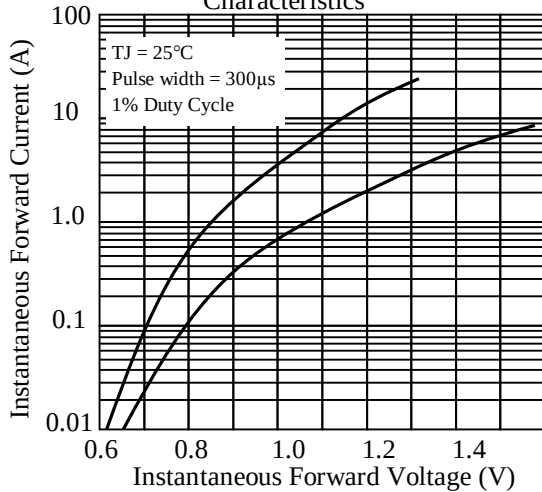


Fig 4. - Typical Reverse Characteristics

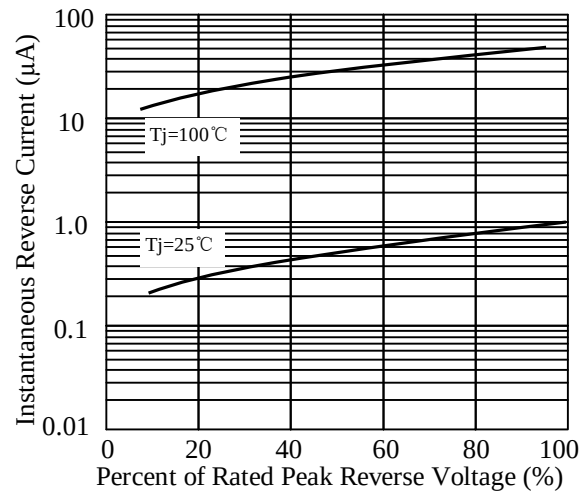


Fig 5. - typical transient thermal impedance

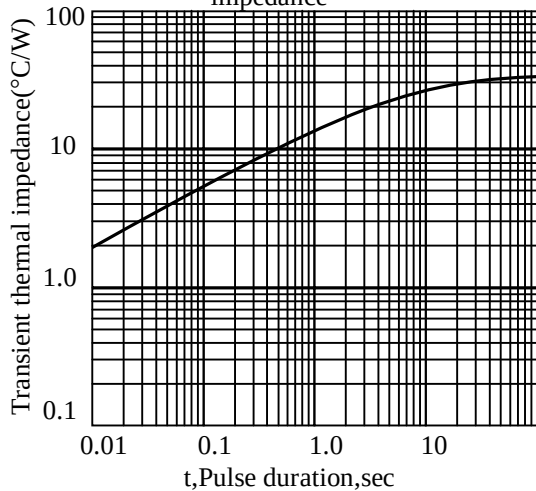
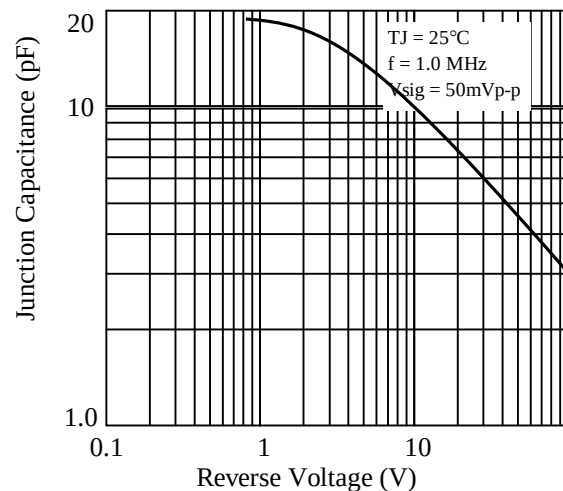
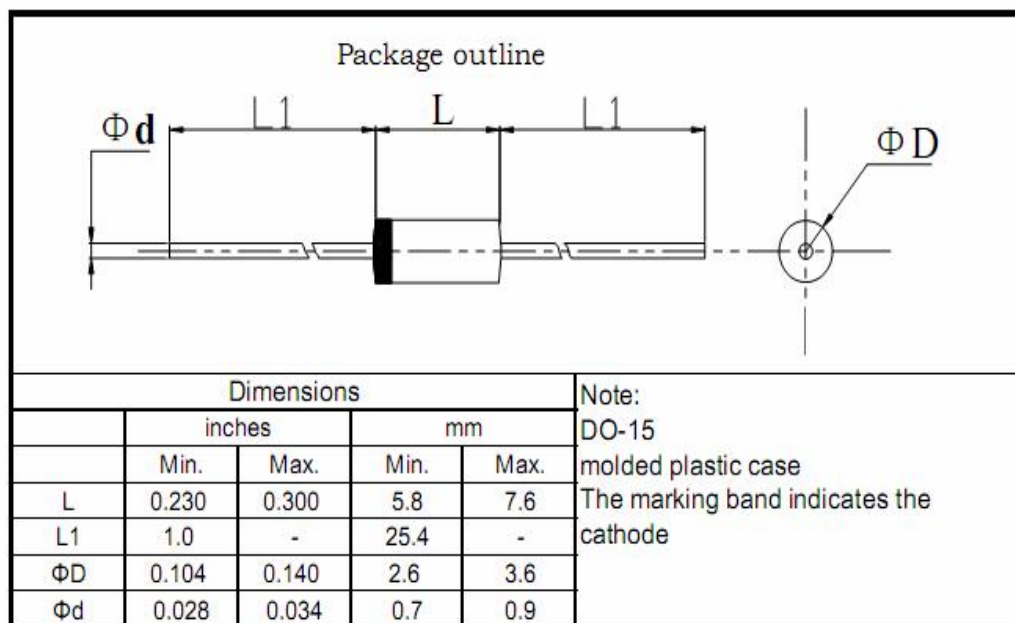


Fig 6. - Typical Junction Capacitance



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3. dimension:



标题:

塑封生产线轴向产品包装规范

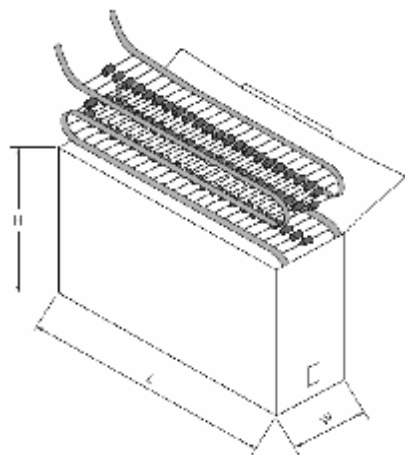
文件编号: WI-250

第 4 版 第 0 次修改

第 1 页

1 弹带盒装 ammo and box

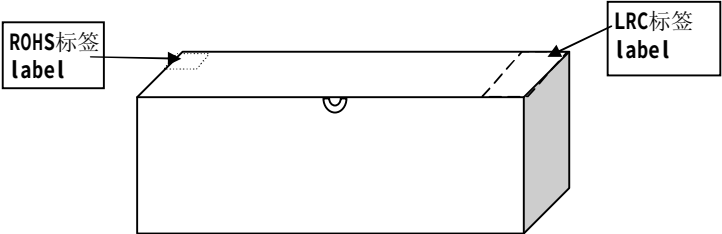
1.1. 弹带盒规格 ammo spec.



单位: mm

	L	W	H
T52	262±2	76±2	90±2
T42	262±2	64±2	90±2
T26	250±3	45±3	95±3

1.2 弹带内盒要求 inner box spec.



标题: 塑封生产线轴向产品包装规范	文件编号: WI-250
	第 4 版 第 0 次修改
	第 2 页

1.4 标签要求 label spec.

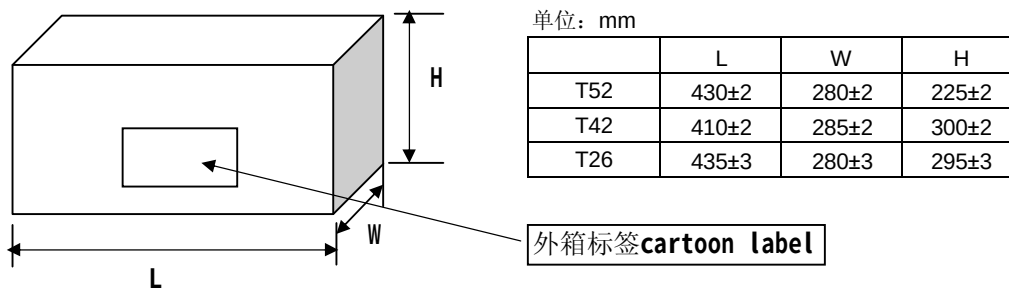
1.4.1 LRC标签 LRC label

成型 FORMING	*****	← 成型规格 forming spec.
型号 TYPE	*****	← LRC产品型号 type
重复峰压 (V) PRV (V)	****	← 产品重复峰压值 peak repitive voltage
额定电流 (A) I _o (A)	**	← 产品额定电流值 average output current
数量 (只) QTY (pcs)	****	← 产品数量 quantity
检验员 CHECKER	02	
日期: DATE:	*****	← 产品生产日期 date

1.4.2 环保标签 environmental protection label



2. 外箱规格 cartoon spec.



3 按以上包装方式, 编带数量和外包装箱产品数量: typing and cartoon spec.

	塑封外型			
	A-405 & DO-41 & R-1	R-3	DO-15	DO-201AD
每根编带数量 quantity/ammo	3K	1.8K	2K(T52) 1.8K(T26)	0.8K
外箱数量 (T52编带) quantity/cartoon	30K	18K	20K	8.0K
外箱数量 (T26编带) quantity/cartoon	60K	36K	36K	-
外箱数量 (T42编带) quantity/cartoon	54K	32.4K	36K	-

标题:

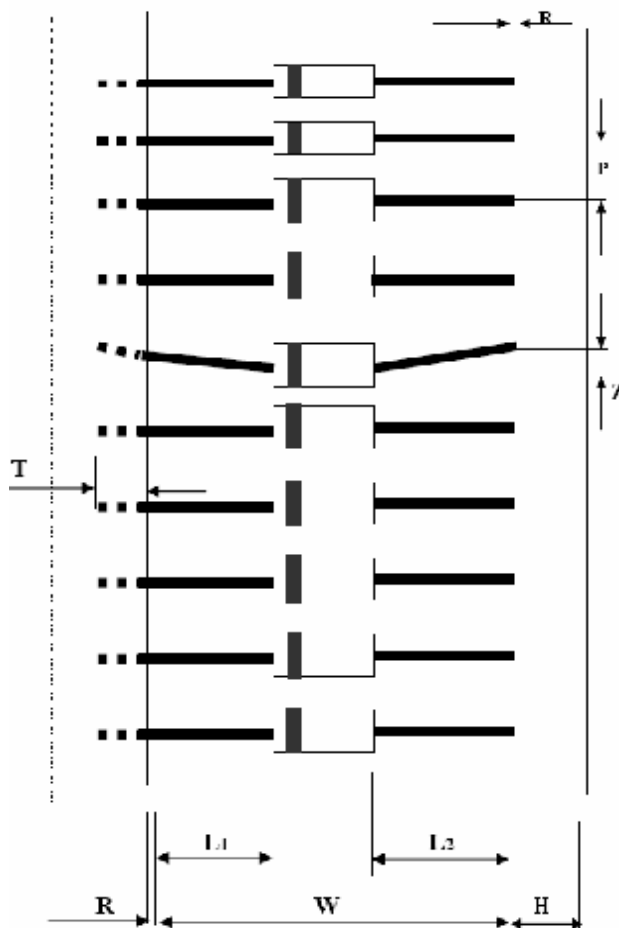
塑封生产线轴向产品包装规范

文件编号: WI-250

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第 3 页

4 编带规格 brede spec



尺寸代号	编带尺寸 typing dimension					
	26/tape	35/tape	40/tape	42/tape	52/tape	52/tape#
W	26 0.0/+1.6	35 -1.0/+0.5	40 -1.0/+0.5	42 -1.0/+1.0	52 -1.0/+2.0	52 -1.0/+2.0
P	5±0.5	5±0.5	5±0.5	5±0.5	5±0.5	10±0.5
L1-L2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
H	6±1.0	6±1.0	6±1.0	6±1.0	6±1.0	6±1.0
Z	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
R	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
T	>3.5	>3.5	>3.5	>3.5	>3.5	>3.5

注: 52编带# 为DO-201AD编带规格 "52编带#" just for D0-201AD

1. 红白编带厚度为0.05mm; 两种胶带各自之间无明显色差; 编带要求均为胶带。
The typing thickness is 0.05mm and color is obvious difference
2. 两端引带20~40cm. Typing lead over 20~40cm
3. 红色编带一端为二极管“负极”; 白色编带一端为二极管“正极”。
red color is cathode ,white color is anode
4. 无卤 green epoxy compound (无卤产品才贴HF only)

Green

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4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	余波	2010-7-28
2	1.增加包装规范。	周杰	2011-10-28