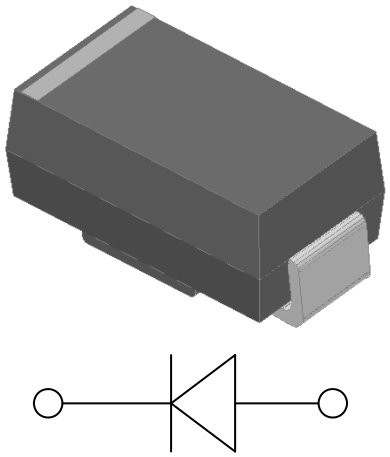
Surface Mount Super Fast Recovery Rectifier Diodes
UG2AA Through UG2JA D0-214AC (SMA)



FEATURES

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Super Fast reverse recovery time
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

TYPICAL APPLICATIONS

For use in high frequency rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.

MECHANICAL DATA

- **Package**: DO-214AC (SMA)
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

MAXIMUM RATINGS (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	UG2AA	UG2BA	UG2CA	UG2DA	UG2FA	UG2GA	UG2HA	UG2JA
Device marking code			UG2AA	UG2BA	UG2CA	UG2DA	UG2FA	UG2GA	UG2HA	UG2JA
Repetitive peak reverse voltage	V_{RRM}	V	50	100	150	200	300	400	500	600
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I_O	A	2.0							
Surge(non-repetitive) forward current @ 60Hz Half-sine wave,1 cycle, Ta=25℃	I_{FSM}	A	50							
Storage temperature	Tstg	℃	-55 ~ +150							
Junction temperature	Tj	℃	-55 ~ +150							

ELECTRICAL CHARACTERISTICS (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	UG2AA	UG2BA	UG2CA	UG2DA	UG2FA	UG2GA	UG2HA	UG2JA
Maximum instantaneous forward voltage drop per diode	VF	V	I_{FM}=2.0A	0.92				1.25		1.7	
Maximum reverse recovery time	T_{RR}	ns	I_F=0.5A,I_R=1.0A, I_{rr}=0.25A	25						35	
Maximum DC reverse current at rated DC blocking voltage per diode@ VRM=VRRM	I_{RRM}	μA	Ta=25℃	5							
			Ta=125℃	50							

THERMAL CHARACTERISTICS (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	UG2AA	UG2BA	UG2CA	UG2DA	UG2FA	UG2GA	UG2HA	UG2JA
Typical Thermal Resistance	$R_{\theta J-A}$	℃/W	75[1)]							
	$R_{\theta J-L}$	℃/W	20[1)]							

Note Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

CHARACTERISTICS (TYPICAL)

FIG.1: Io-TL Curve

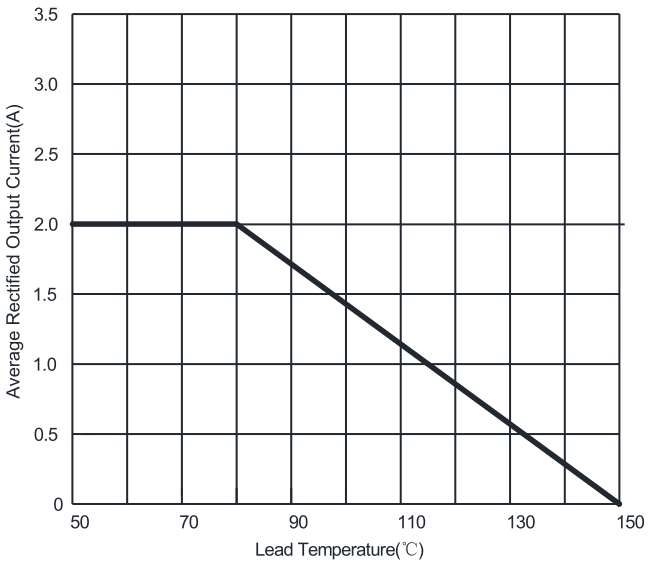


FIG2:Surge Forward Current Capability

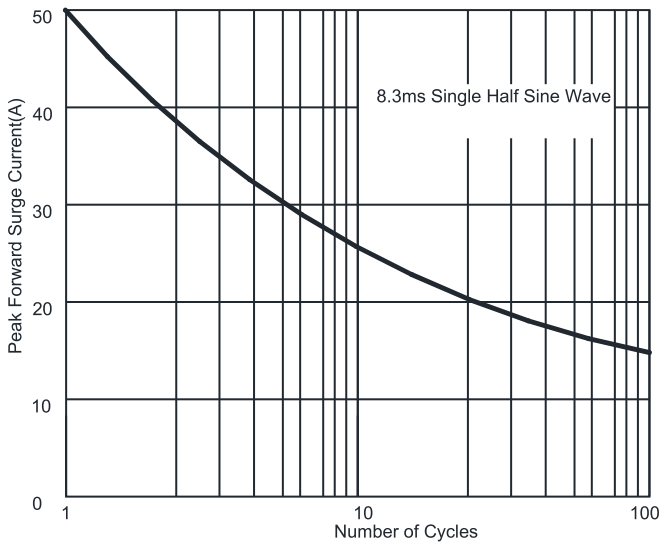


FIG.3: Typilcal Forward Characteristics

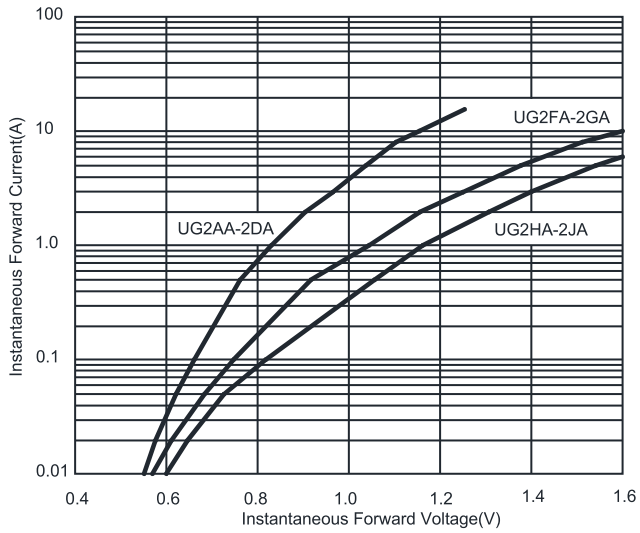


FIG4:Typical Reverse Characteristics

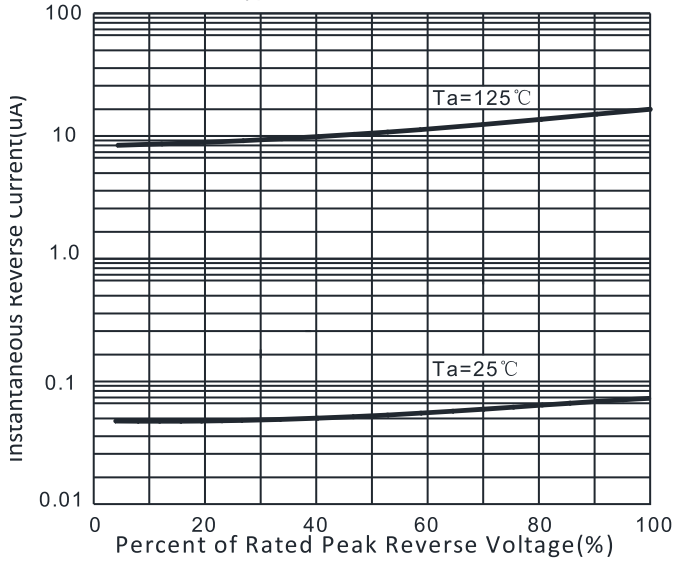
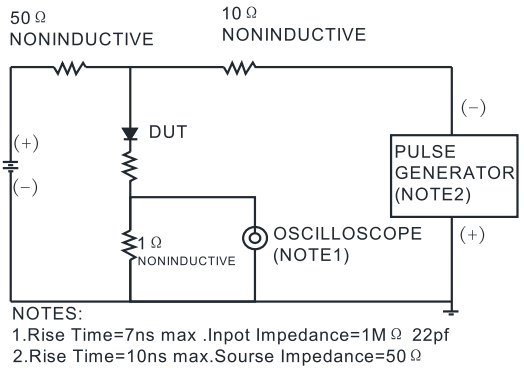
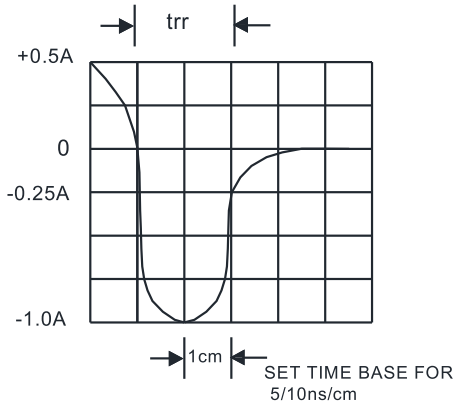


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time





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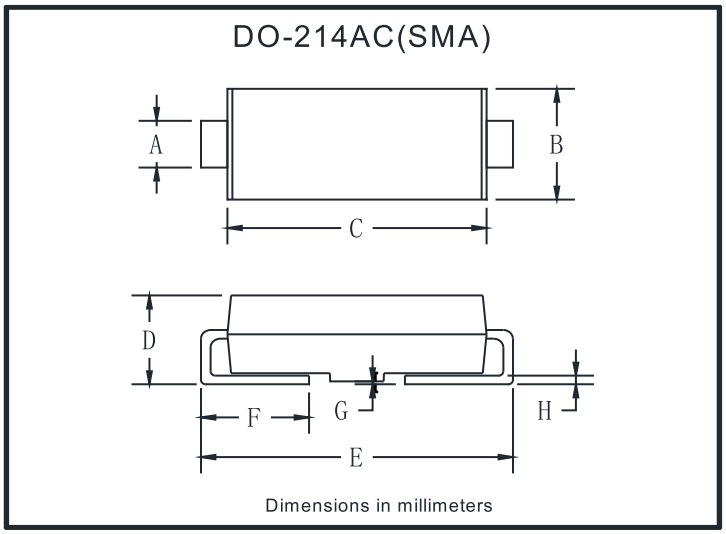
UG2AA Through UG2JA D0-214AC (SMA)

PACKAGING INFORMATION

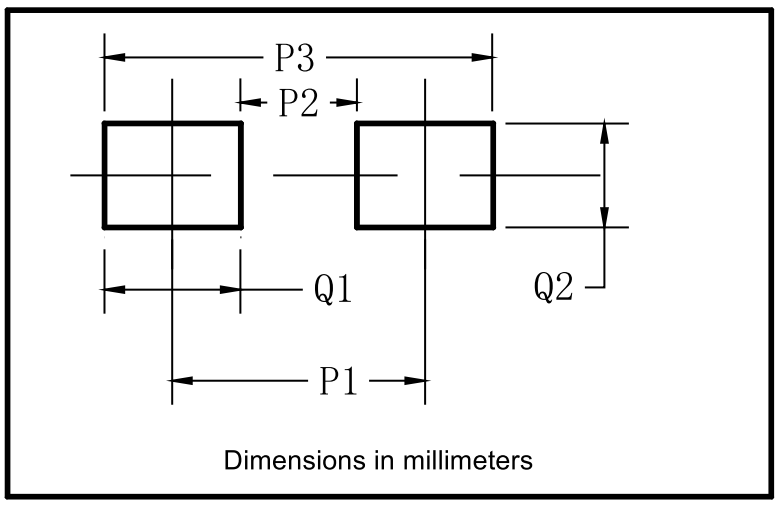
PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
UG2AA- UG2JA	F1	Approximate 0.059	5000	10000	80000	13” reel
UG2AA- UG2JA	F2	Approximate 0.059	7500	15000	120000	13” reel
UG2AA- UG2JA	F3	Approximate 0.059	7500	15000	60000	13” reel
UG2AA- UG2JA	F4	Approximate 0.059	1800	7200	57600	7” reel
UG2AA- UG2JA	F5	Approximate 0.059	2000	8000	64000	7” reel
UG2AA- UG2JA	F6	Approximate 0.059	5000	10000	100000	13” reel

OUTLINE DIMENSIONS



DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.25	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.08	0.20
H	0.15	0.31

SUGGESTED PAD LAYOUT



DO-214AC(SMA)	
Dim	Millimeters
P1	4.00
P2	1.50
P3	6.50
Q1	2.50
Q2	1.70