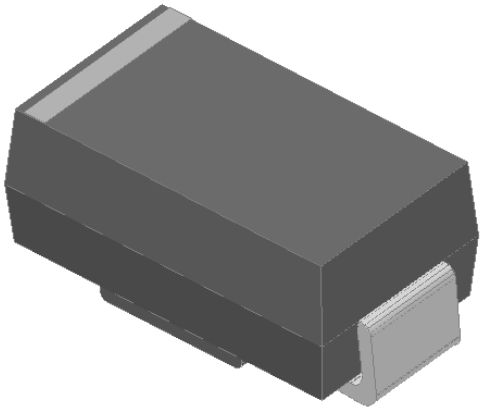
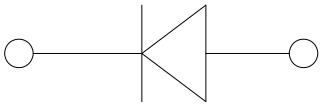
Surface Mount Ultra-Fast Recovery Diode FRED Pt





Features

- Low profile package
- Ideal for automated placement
- Adopt FRED chip
- 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	NUG2DA
Device marking code			NUG2DA
Maximum Repetitive peak reverse voltage	V_{RRM}	V	200
Maximum RMS Voltage	V_{RMS}	V	140
Maximum DC Blocking Voltage	V_{DC}	V	200
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
Current squared time @1ms≤t≤8.3ms Tj=25℃，Rating of per diode	I^2t	A^2S	10.38
Typical junction capacitance@ Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C.	Cj	pF	40
Storage temperature	T_{stg}	℃	-55 ~ +150
Junction temperature	Tj	℃	-55 ~ +150

■Electrical Characteristics（Ta=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	NUG2DA
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=2.0A	1.0
Maximum reverse recovery time	T_{RR}	ns	I_F=0.5A,I_R=1.0A, I_{rr}=0.25A	20
Maximum DC reverse current at rated DC blocking voltage per diode @ $V_{RM}=V_{RRM}$	I_{RRM}	μA	Ta=25℃	5
			Ta=125℃	50

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	NUG2DA
Typical Thermal Resistance	$R_{\theta J-A}$	℃/W	75[1)]
	$R_{\theta J-L}$	℃/W	20[1)]
	$R_{\theta J-C}$	℃/W	18[1)]

Note
(1) 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

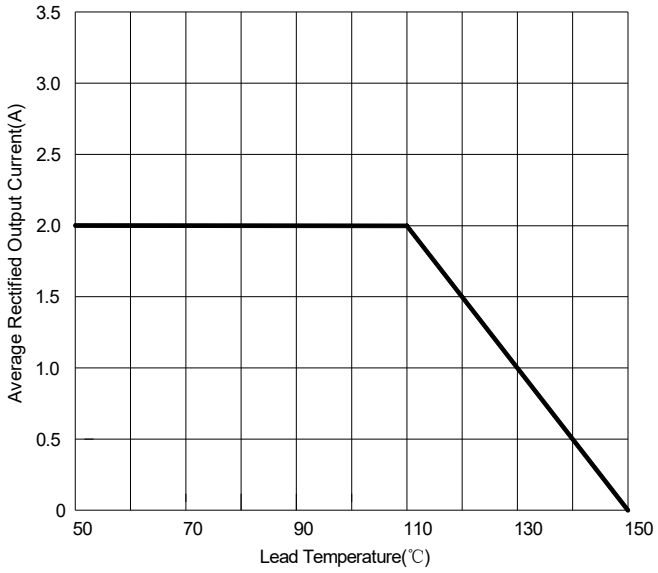


FIG2:Surge Forward Current Capability

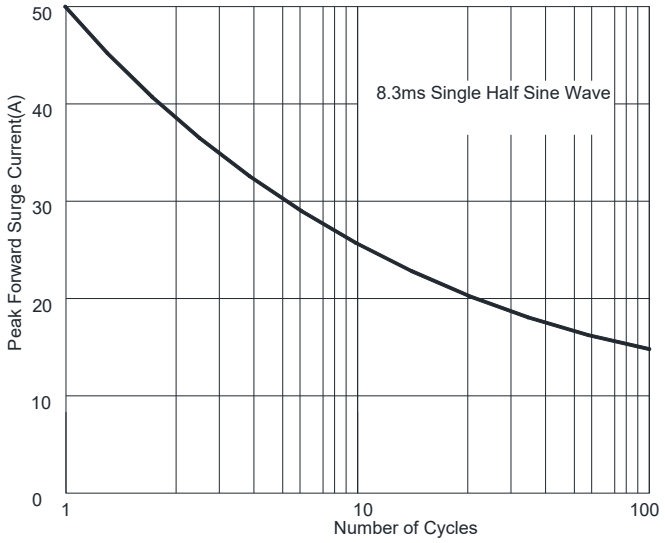


FIG.3: Typilcal Forward Characteristics

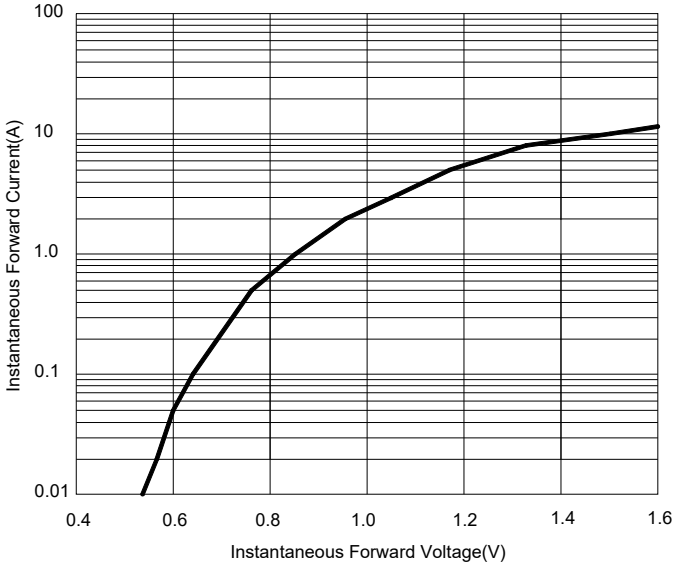


FIG4:Typical Reverse Characteristics

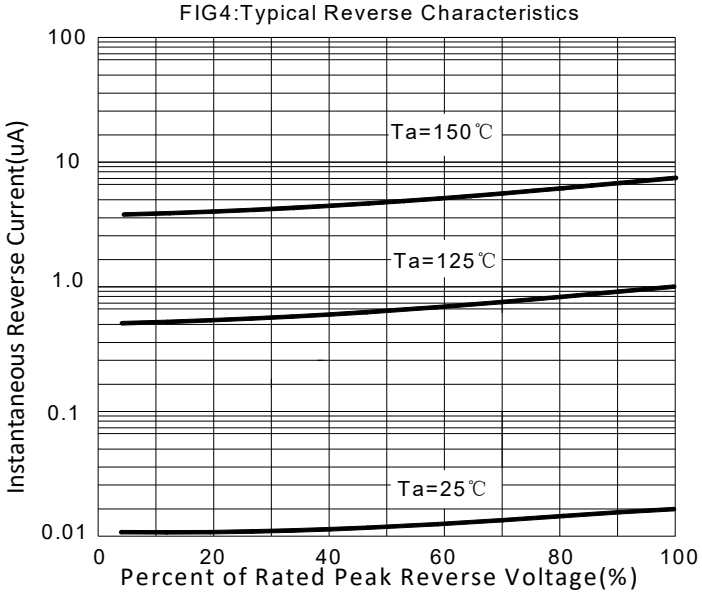
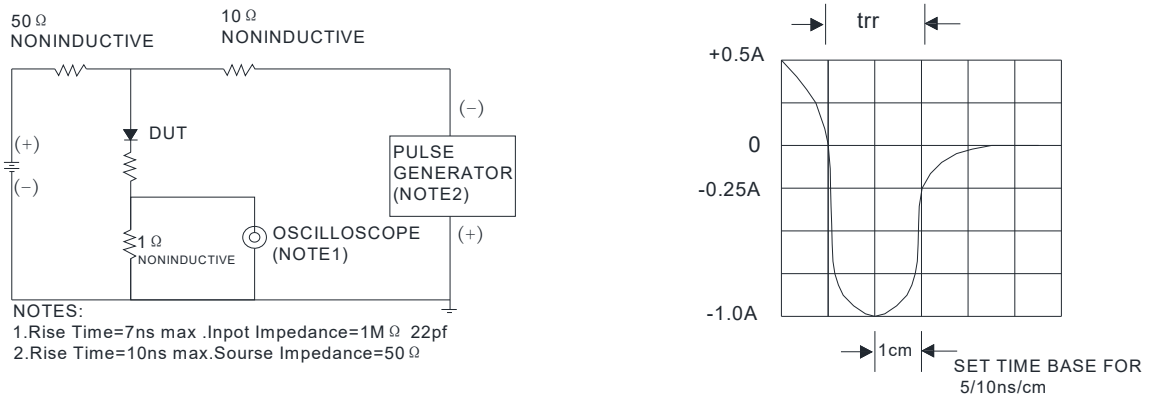


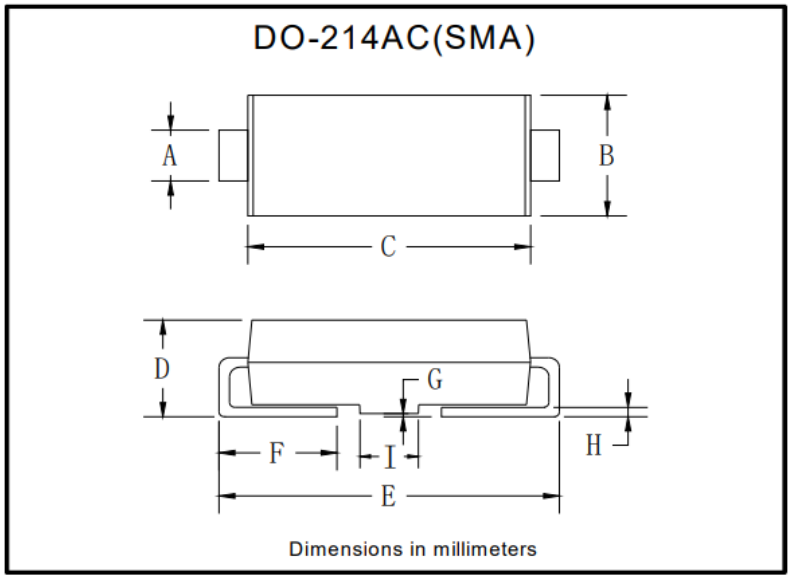
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■Ordering Information (Example)

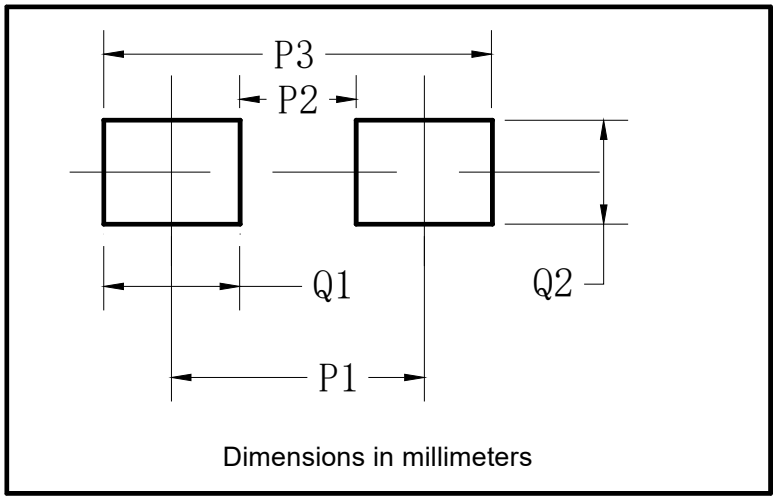
PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
NUG2DA	F1	Approximate 0.059	5000	10000	80000	13” reel
NUG2DA	F2	Approximate 0.059	7500	15000	120000	13” reel
NUG2DA	F3	Approximate 0.059	7500	15000	60000	13” reel
NUG2DA	F4	Approximate 0.059	1800	7200	57600	7” reel
NUG2DA	F5	Approximate 0.059	2000	8000	64000	7” reel
NUG2DA	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	4.00	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.05	0.20
H	0.15	0.31
I	1.70	2.10

■Suggested Pad Layout



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

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