



HIGH-SPEED SWITCHING DIODE

# DAN217N3

## Description

The DAN217N3 consists of two diodes in a plastic surface mount package. The diodes are connected in series and the unit is designed for high-speed switching application in hybrid thick and thin-film circuits.

## Features

- Small SMD Package (SOT-23)
- Ultra-high Speed
- Low Forward Voltage
- Fast Reverse Recovery Time

## Absolute Maximum Ratings

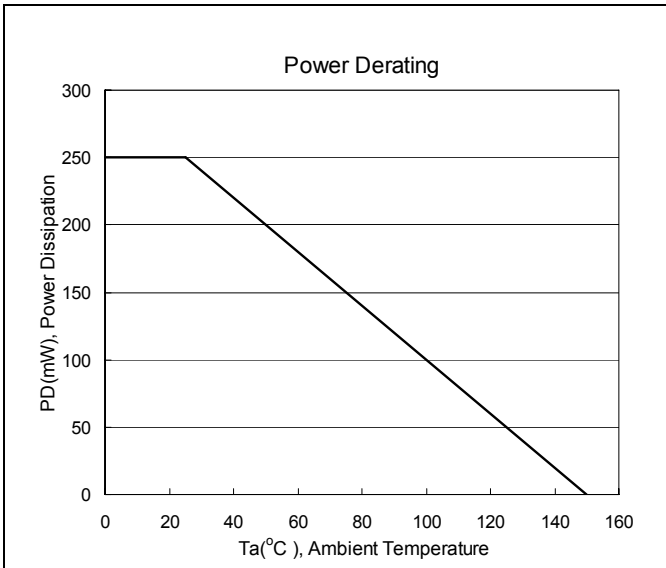
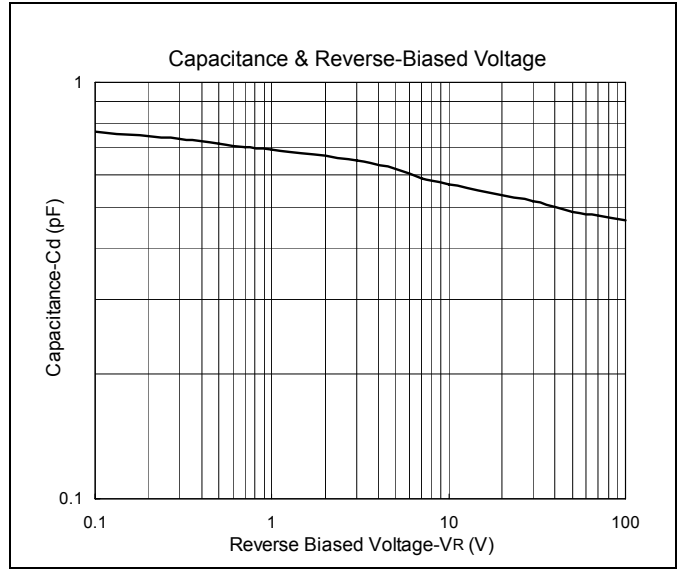
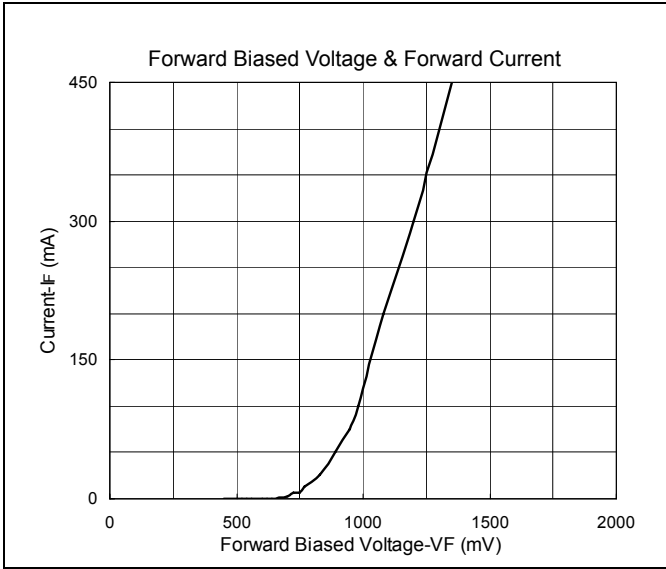
- Maximum Temperatures  
Storage Temperature ..... -65 ~ +150 °C  
Junction Temperature..... +150 °C
- Maximum Power Dissipation  
Total Power Dissipation (Ta=25°C)..... 250 mW
- Maximum Voltages and Currents (Ta=25°C)  
Reverse Voltage..... 100 V  
Repetitive Reverse Voltage ..... 100 V  
Forward Current..... 150 mA  
Repetitive Forward Current ..... 500 mA  
Forward Surge Current (1ms)..... 1000 mA

## Characteristics (Ta=25°C)

Characteristic	Symbol	Condition	Min	Max	Unit
Reverse Breakdown Voltage	V <sub>(BR)</sub>	I <sub>R</sub> =100μA	100	-	V
Forward Voltage	V <sub>F</sub> (1)	I <sub>F</sub> =1mA	-	715	mV
	V <sub>F</sub> (2)	I <sub>F</sub> =10mA	-	855	mV
	V <sub>F</sub> (3)	I <sub>F</sub> =50mA	-	1000	mV
	V <sub>F</sub> (4)	I <sub>F</sub> =150mA	-	1250	mV
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =100V	-	2.5	μA
Total Capacitance	C <sub>T</sub>	V <sub>R</sub> =0V, f=1MHz	-	1.5	pF
Reverse Recovery Time	T <sub>rr</sub>	I <sub>F</sub> =I <sub>R</sub> =10mA, R <sub>L</sub> =100Ω measured at I <sub>R</sub> =1mA	-	6	nS



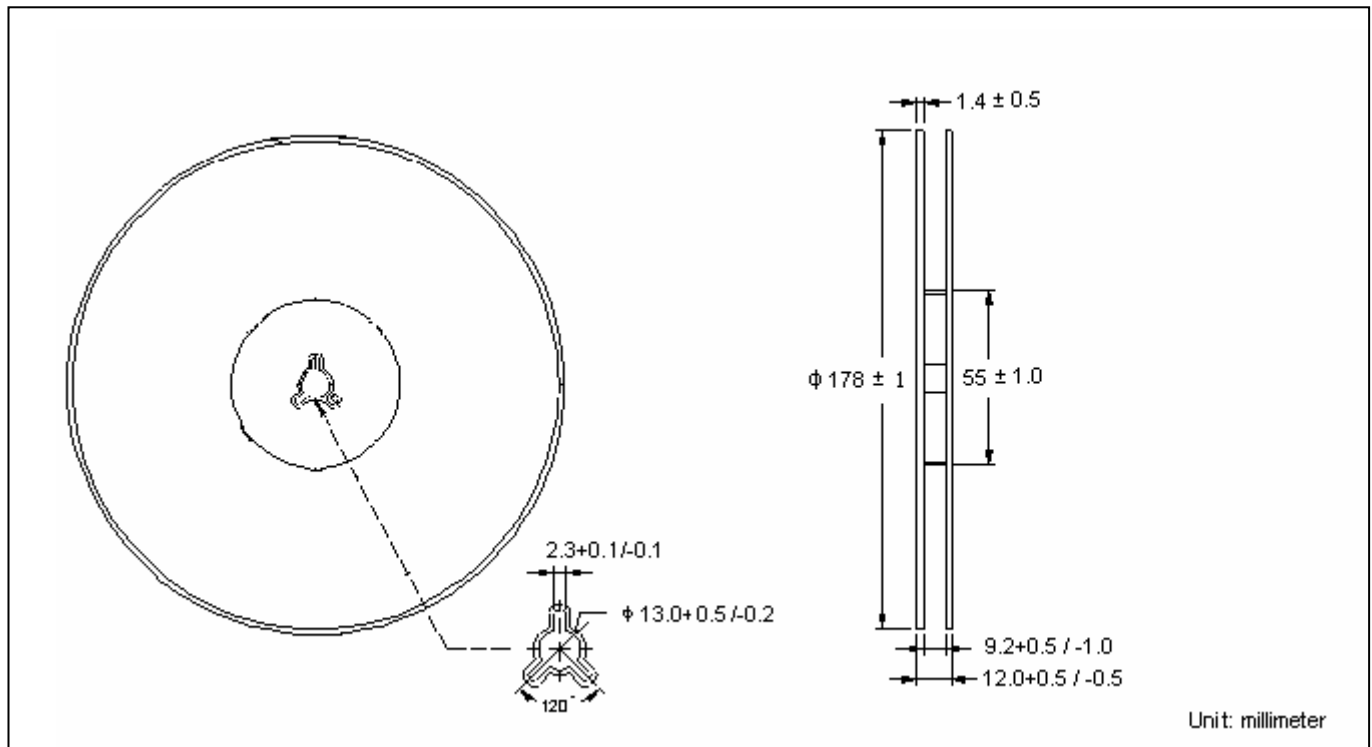
### Typical Characteristics



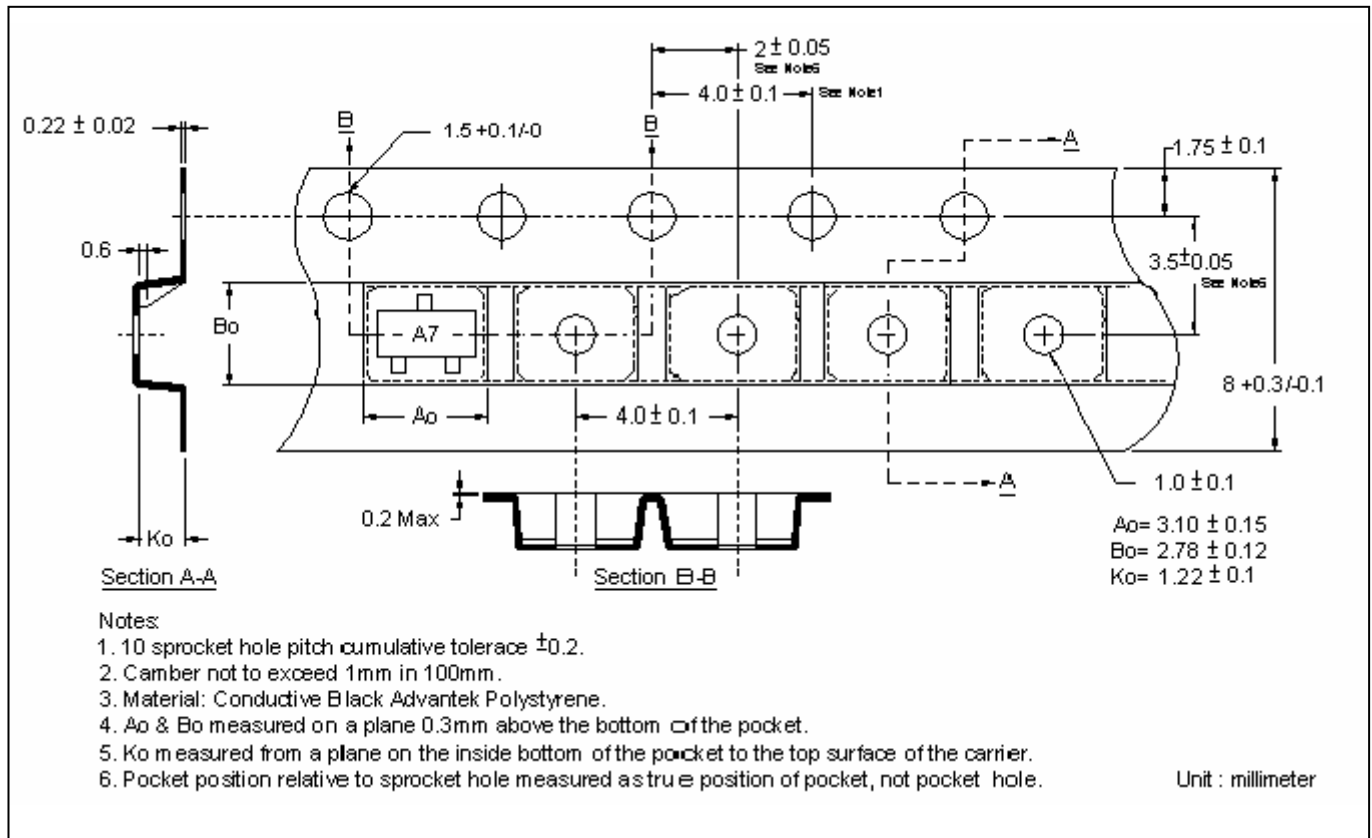
### Ordering Information

Device	Package	Shipping	Marking
DAN217N3	SOT-23 (Pb-free)	3000 pcs / Tape & Reel	A7

**Reel Dimension**



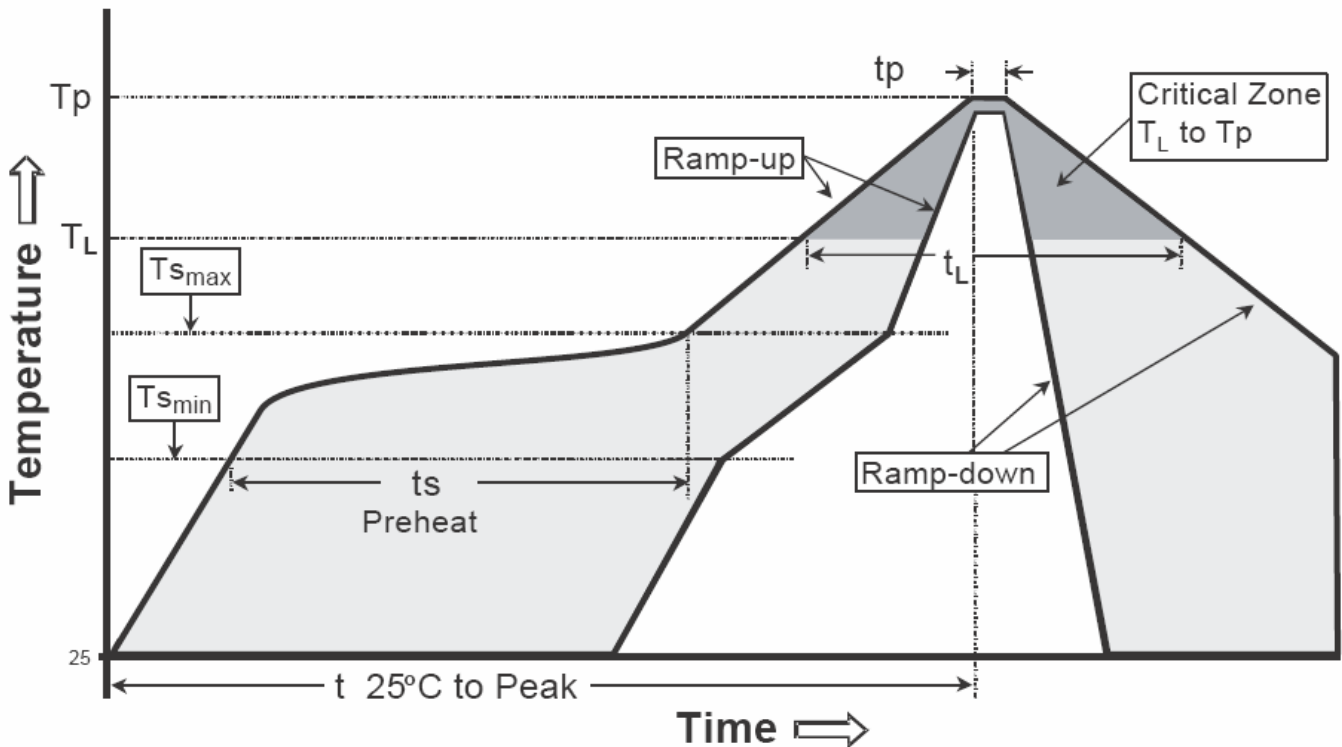
**Carrier Tape Dimension**



**Recommended wave soldering condition**

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

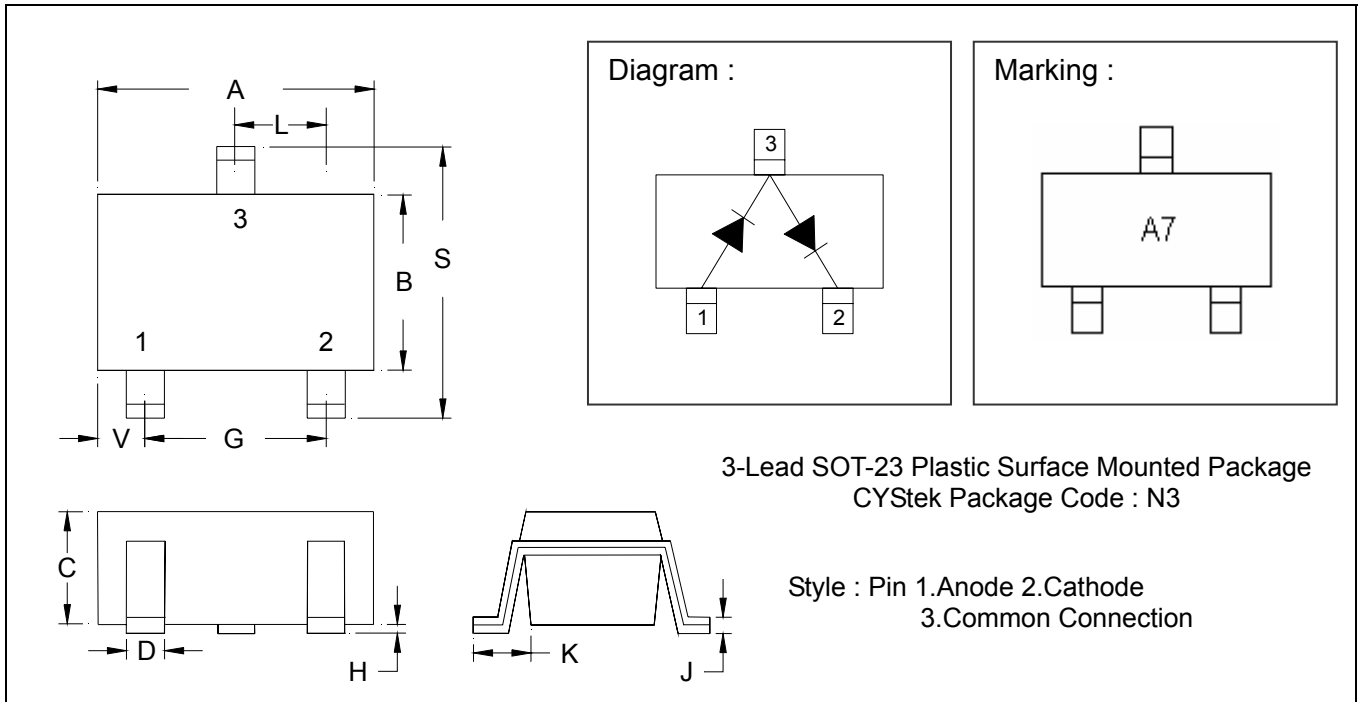
**Recommended temperature profile for IR reflow**



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)	100°C	150°C
-Temperature Max(Ts max)	150°C	200°C
-Time(ts min to ts max)	60-120 seconds	60-180 seconds
Time maintained above:		
-Temperature (TL)	183°C	217°C
- Time (tL)	60-150 seconds	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.

**SOT-23 Dimension**



\*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0034	0.0070	0.85	0.177
B	0.0472	0.0630	1.20	1.60	K	0.0128	0.0266	0.32	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1083	2.10	2.75
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0005	0.0040	0.013	0.10					

**Notes:** 1.Controlling dimension: millimeters.  
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

**Material:**

- Lead: Pure tin plated.
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0.

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