

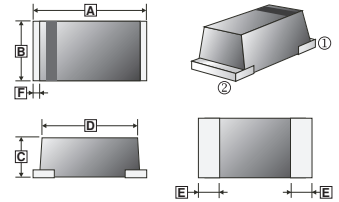
RoHS Compliant Product

A suffix of "-C" specifies halogen-free and RoHS Compliant

## FEATURES

- Batch process design, excellent power dissipation offers Better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Very tiny plastic SMD package.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500/228

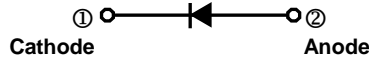
## SOD-323N



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.30	2.70	D	1.7	2.1
B	1.05	1.45	E	0.4 TYP	
C	0.80	1.20	F	0.30 TYP	

## PACKAGING INFORMATION

- Epoxy: UL94-V0 rated flame retardant
- Case: Molded plastic, SOD323N
- Terminals: Plated terminals, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band
- Weight : 0.008 gram



## MARKING CODE

PART NUMBER	MARKING CODE	PART NUMBER	MARKING CODE
SM120N	12	SM160N	16
SM130N	13	SM180N	18
SM140N	14	SM1100N	10
SM150N	15		

## MAXIMUM RATINGS (T<sub>a</sub> = 25°C unless otherwise specified.)

PARAMETERS	SYMB OL	PART NUMBERS							UNIT	TESTING CONDITION
		SM 120 N	SM 130 N	SM 140 N	SM 150 N	SM 160 N	SM 180 N	SM 1100 N		
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	V	
RMS Voltage (Max.)	V <sub>RMS</sub>	14	21	28	35	42	56	70	V	
Reverse Voltage (Max.)	V <sub>R</sub>	20	30	40	50	60	80	100	V	
Forward Voltage (Max.)	V <sub>F</sub>	0.50		0.70		0.85			V	
Forward Rectified Current (Max.)	I <sub>O</sub>	1.0							A	See Fig.1
Peak Forward Surge Current	I <sub>FSM</sub>	30							A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)
Reverse Current (Max.)	I <sub>R</sub>	0.5							mA	V <sub>R</sub> =V <sub>RRM</sub> , T <sub>A</sub> =25°C
		10								V <sub>R</sub> =V <sub>RRM</sub> , T <sub>A</sub> =125°C
Thermal Resistance (Typ.)	R <sub>θJA</sub>	90							°C/W	Junction to ambient
Diode Junction Capacitance (Typ.)	C <sub>J</sub>	120							pF	f=1MHz and applied 4V DC reverse voltage
Storage and Operating Temperature Range	T <sub>STG</sub> , T <sub>J</sub>	-65 ~ 175, -55 to 125			-65 ~ 175, -55 to 150				°C	

**RATINGS AND CHARACTERISTIC CURVES**

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

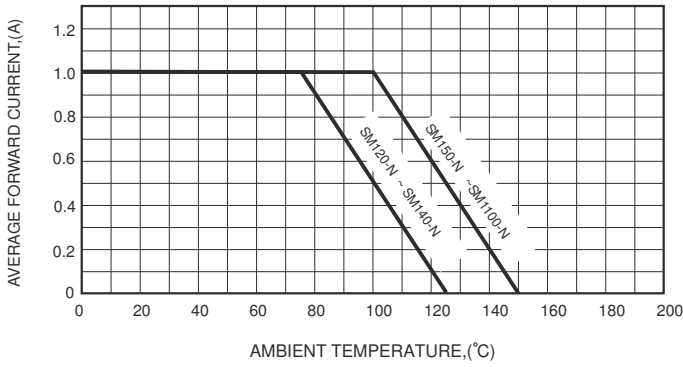


FIG.2-TYPICAL FORWARD CHARACTERISTICS

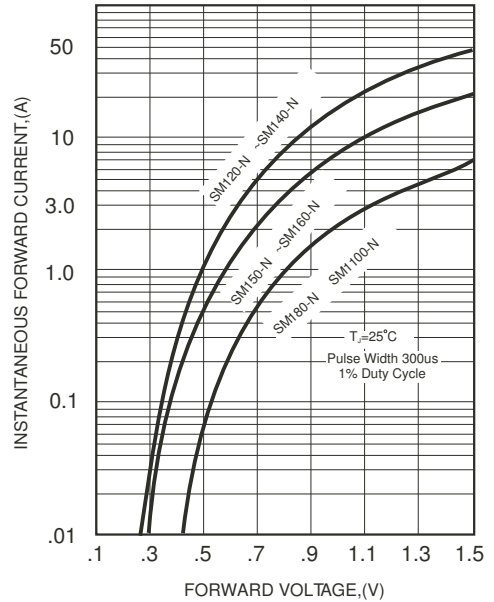


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

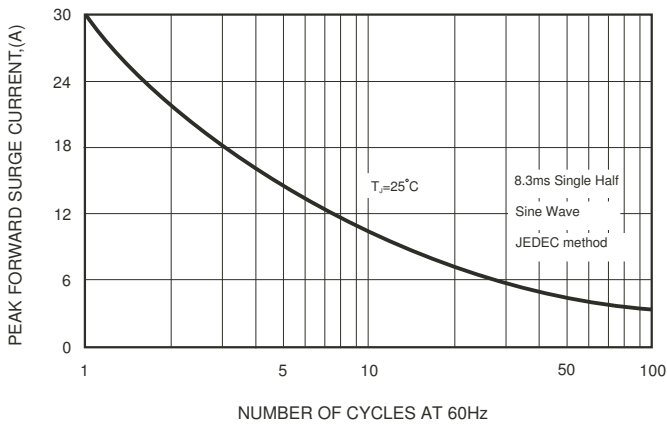


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

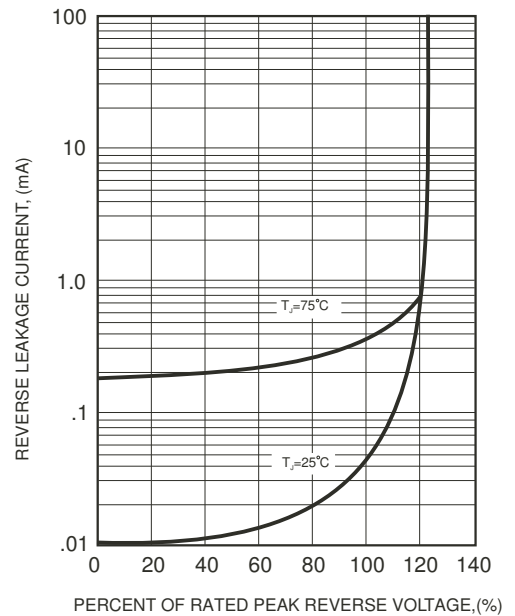


FIG.4-TYPICAL JUNCTION CAPACITANCE

