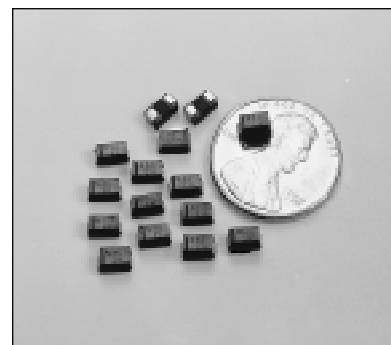
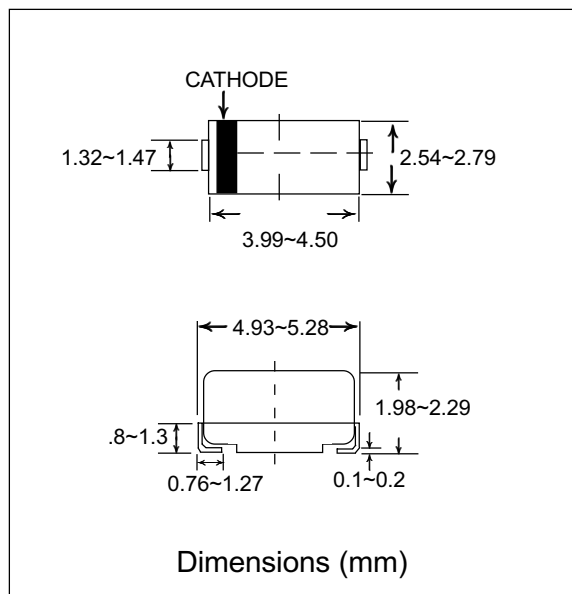


FEATURES

- VOLTAGE: 20 TO 60 VOLTS, CURRENT: 1.0 & 2.0 AMPERE
- CORRESPONDS TO 1N5817 THRU 1N5819 (1Amp) IN SURFACE MOUNT PACKAGE
- FLAT PACK - LOW PROFILE, FOR SURFACE MOUNT APPLICATIONS
- FAST RESPONSE AND LOW FORWARD VOLTAGE
- HIGH TEMPERATURE SOLDERING (250°C/10 SECONDS)
- EASY PICK AND PLACE



SURFACE MOUNT



MECHANICAL DATA:

SIZE: SMA/DO-214AC

CASE: Molded epoxy

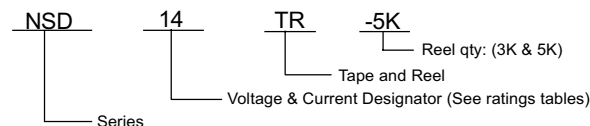
TERMINALS: Solder plated Copper alloy

POLARITY: Indicated by cathode band

STANDARD PACKAGING: 12mm tape (EIA-RS-481)

WEIGHT: 0.064 gram

PART NUMBERING SYSTEM



MAXIMUM RATINGS (At T_A=25°C unless otherwise noted)

Ratings	Symbol	NSD12	NSD13	NSD14	NSD15	NSD16	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	20	30	40	50	60	Volts
Maximum RMS Voltage	VRMS	14	21	28	35	42	Volts
Maximum DC Blocking Voltage	VDC	20	30	40	50	60	Volts
Maximum Average Forward Rectified Current	Io	1.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	30					Amps
Maximum Thermal Resistance	(Note 2) RqJL	25					°C/W
Typical Junction Capacitance (Note 1)	CJ	110			80		pF
Operating and Storage Temperature Range	TJ, TSTG	-65 to +125			-65 to +150		°C
Typical Reverse Recovery Time	TRR	15					nS

ELECTRICAL CHARACTERISTICS (At T_A=25°C unless otherwise noted)

Characteristics		Symbol	NSD12	NSD13	NSD14	NSD15	NSD16	UNITS
Maximum Forward Voltage at 1.0A DC		VF	0.50			0.65		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage (Note 3)	@TA=25°C	IR	0.5					mAmps
	@TA=100°C		10.0			5.0		mAmps

- NOTES:
1. Measured at 1.0 MHz and applied average voltage of 4.0VDC.
 2. Thermal resistance junction to terminal, 5mm² (0.013 mm Thick) copper land patterns.
 3. Pulse width 300uS, 2% duty cycle.

RATING AND CHARACTERISTIC CURVES (NSD12 THRU NSD16)

FIG. 1 - FORWARD CURRENT DERATING CURVE

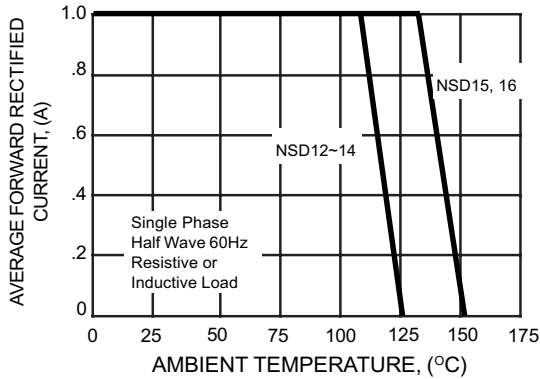


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

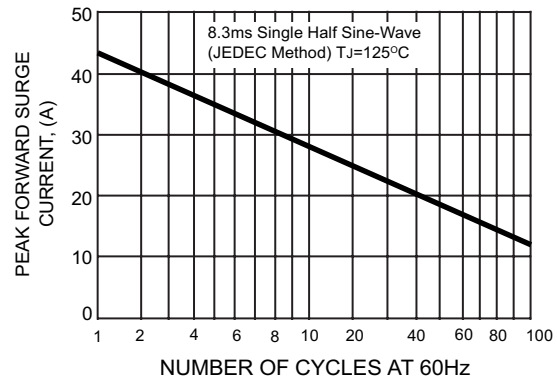


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

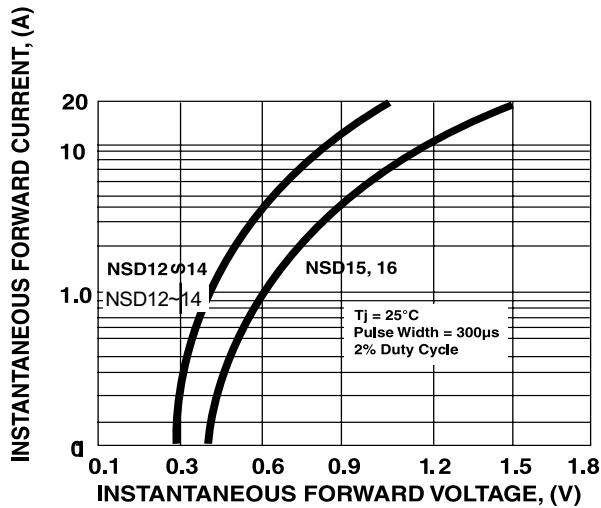


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

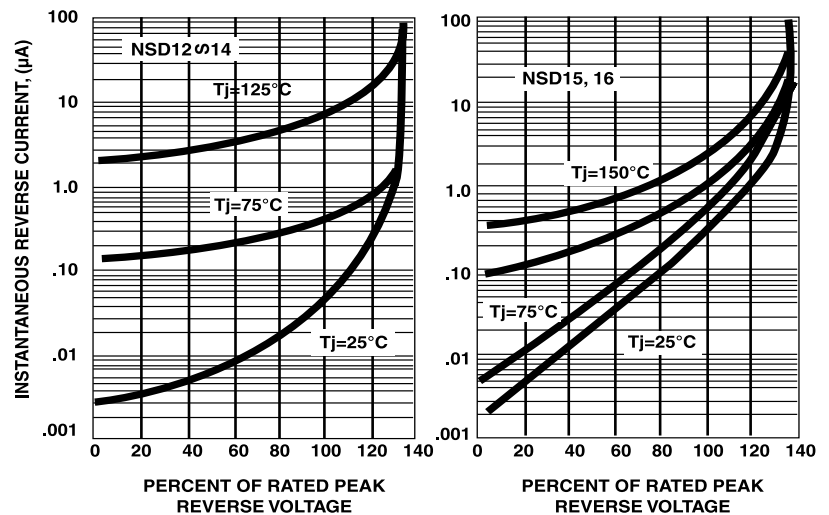
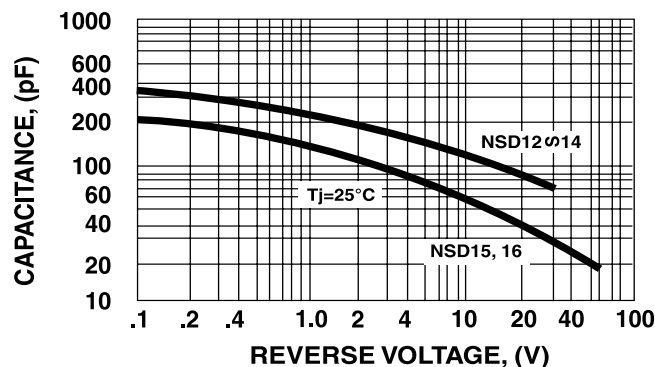


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



MAXIMUM RATINGS (At $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Ratings	Symbol	NSD22	NSD23	NSD24	NSD25	NSD26	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	20	30	40	50	60	Volts
Maximum RMS Voltage	VRMS	14	21	28	35	42	Volts
Maximum DC Blocking Voltage	VDC	20	30	40	50	60	Volts
Maximum Average Forward Rectified Current	Io	2.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	50					Amps
Typical Thermal Resistance	Rth-JA Rth-JL	75.0 17.0					°C/W
Typical Junction Capacitance (Note 1)	CJ	220			180		pF
Operating and Storage Temperature Range	TJ/TSTG	-65 to +125/-65 to +150			-65 to +150		°C
Typical Reverse Recovery Time	TRR	15					nS

ELECTRICAL CHARACTERISTICS (At $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Characteristics		Symbol	NSD22	NSD23	NSD24	NSD25	NSD26	UNITS
Maximum Forward Voltage at 2.0A DC		VF	0.50			0.70		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@TA=25°C	IR	0.5					mAmps
	@TA=100°C		20.0			10.0		mAmps

NOTE: 1. Measured at 1.0 MHz and applied average voltage of 4.0VDC.

Fig.1 - Derated Curve for Output Rectifier Current

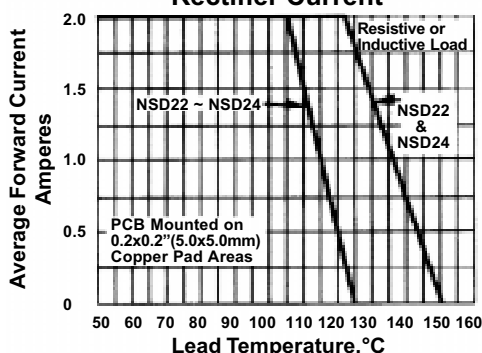


Fig.2 - Typical Junction Capacitance

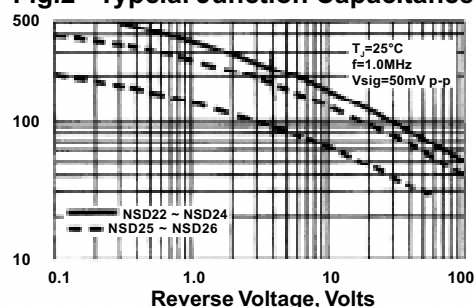


Fig.3 - Typical Reverse Characteristics

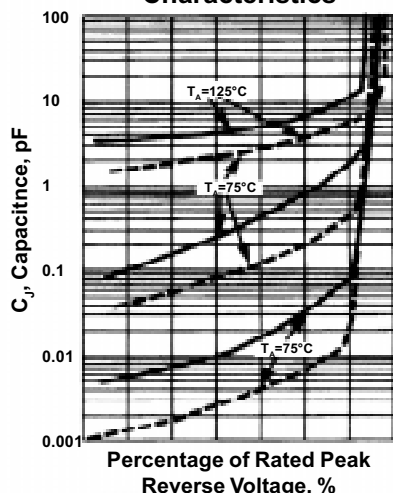


Fig.4 - Maximum Non-Repetitive Peak Forward Surge Current

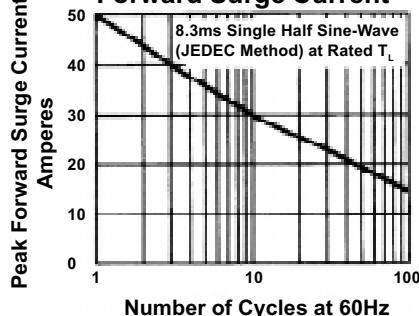
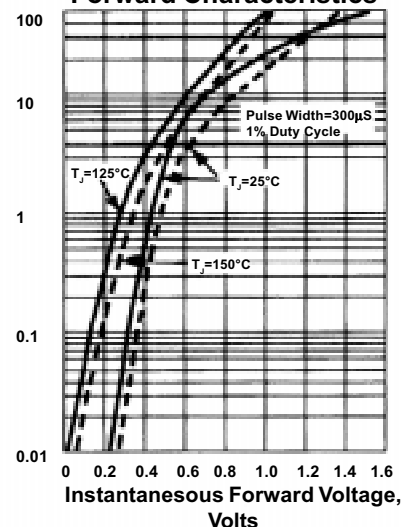
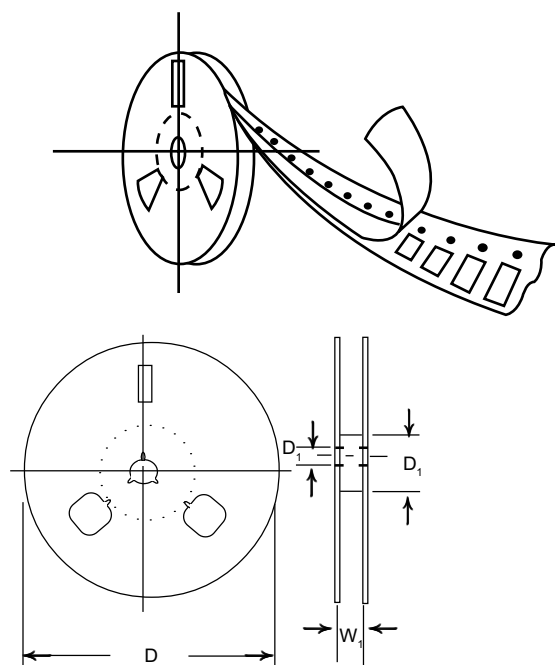
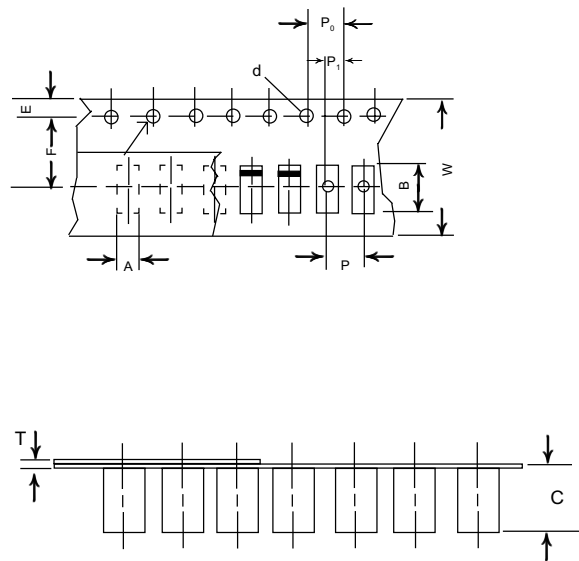


Fig.5 - Typical Instantaneous Forward Characteristics



TAPING AND MOUNTING SPECIFICATIONS

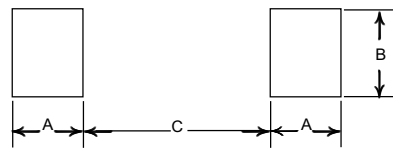


SURFACE MOUNT

RECOMMENDED LAND PATTERN

REEL QUANTITIES

Reel Size	Qty/Reel
13 inch (330mm)	3000, 5000 pcs



Dimensions	(mm)
A	1.2-1.8
B	1.5-2.2
C	2.7 max.

Item	Symbol	Specifications (mm)	Specifications (inch)
Carrier Width	A	3.2 max.	.126 max.
Carrier Length	B	7.8 max.	.307 max.
Carrier Depth	C	4.5 max.	.177 max.
Sprocket Hole	d	1.5 ± 0.1	.059 ± .004
Reel Outside Diameter	D	178 ± 2.0	7.00 ± .079
Reel Inner Diameter	D1	50 min.	1.969 min.
Feed Hole Diameter	D2	13.0 ± 0.5	.512 ± .020
Sprocket Hole Position	E	1.75 ± 0.1	.069 ± .004
Punch Hole Position	F	5.5 ± 0.1	.217 ± .004
Punch Hole Pitch	P	4.0 ± 0.1	.157 ± .004
Sprocket Hole Pitch	P0	4.0 ± 0.1	.157 ± .004
Embossment Center	P1	2.0 ± 0.05	.079 ± .002
Overall Tape Thickness	T	1.1 max.	.043 max.
Tape Width	W	12.0 ± 0.3	.472 ± .012
Reel Width	W1	18.4 max.	.724 max.

NOTE: Devices are packed in accordance with EIA standard RS-481-A and specifications given above.

