

NSVJ2394SA3

N-Channel JFET 15V, 10 to 32mA, 38mS

Automotive JFET designed for compact and efficient designs and including high gain performance. AEC-Q101 qualified JFET and PPAP capable suitable for automotive applications.

Features

- Large | yfs |
- Small Ciss
- This Small Package Enables Sets to be Smaller and Thinner
- Ultralow Noise Figure
- Pb-Free and RoHS compliance
- AEC-Q101 qualified and PPAP capable.

Applications

- AM Tuner RF Amplifier
- Low Noise Amplifier

SPECIFICATIONS

ABSOLUTE MAXIMUM RATINGS at $T_a = 25^\circ\text{C}$ (Note 1)

Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	V_{DSX}	15	V
Gate-to-Drain Voltage	V_{GDS}	-15	V
Gate Current	I_G	10	mA
Drain Current	I_D	50	mA
Allowable Power Dissipation	P_D	200	mW
Operating Junction and Storage Temperature	T_J, T_{Stg}	-55 to +150	$^\circ\text{C}$

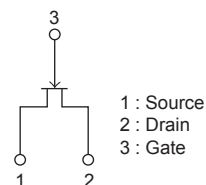
Note 1 : Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



ON Semiconductor®

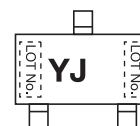
www.onsemi.com

ELECTRICAL CONNECTION N-Channel



SC-59 / CP3

MARKING



NSVJ2394SA3T1G

ORDERING INFORMATION

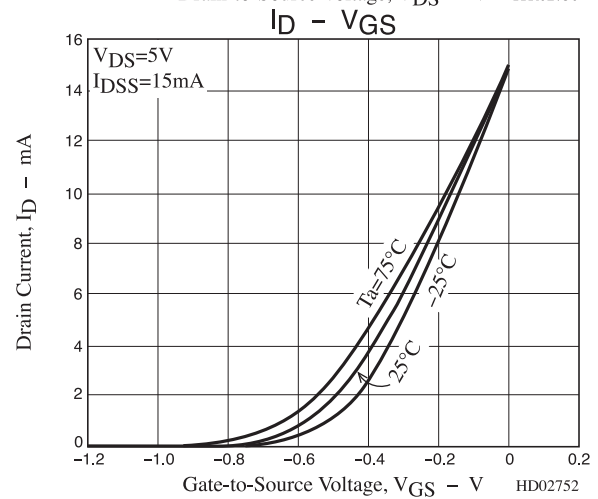
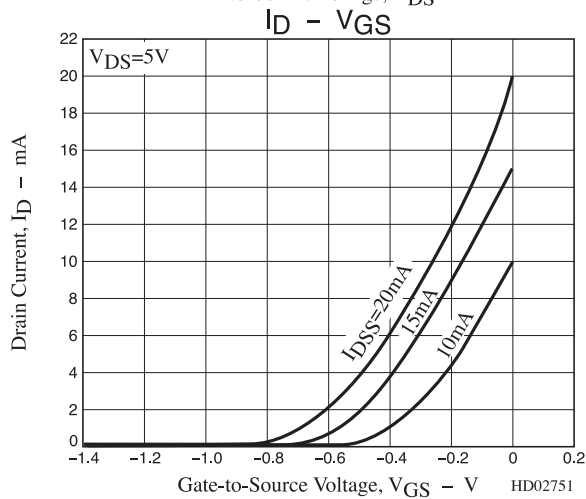
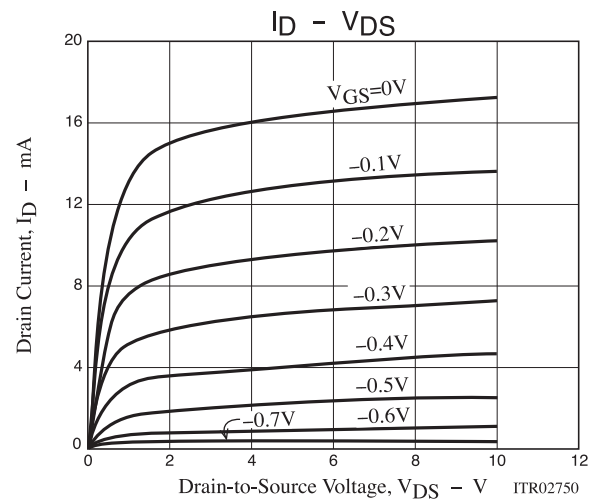
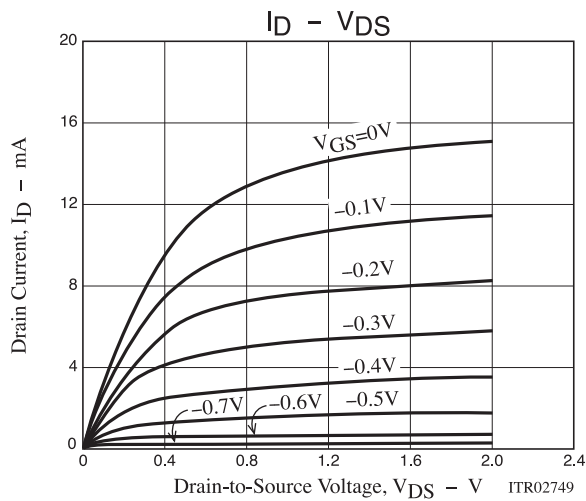
See detailed ordering and shipping information on page 5 of this data sheet

NSVJ2394SA3

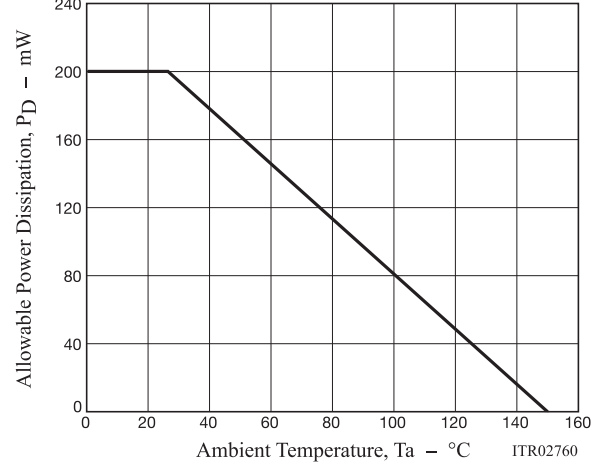
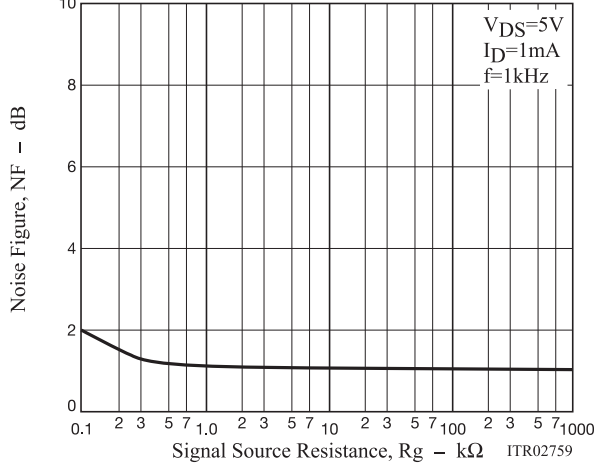
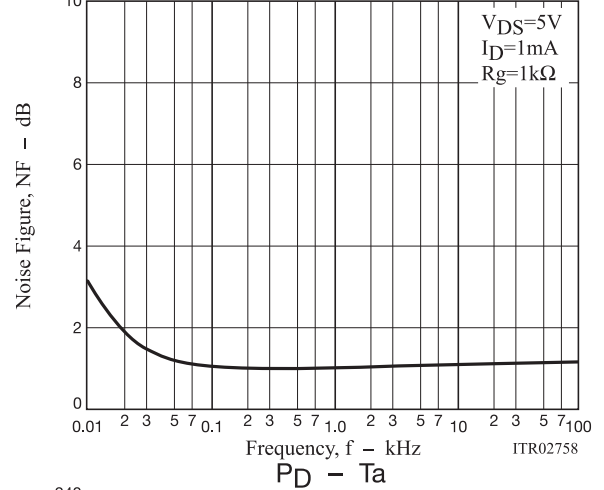
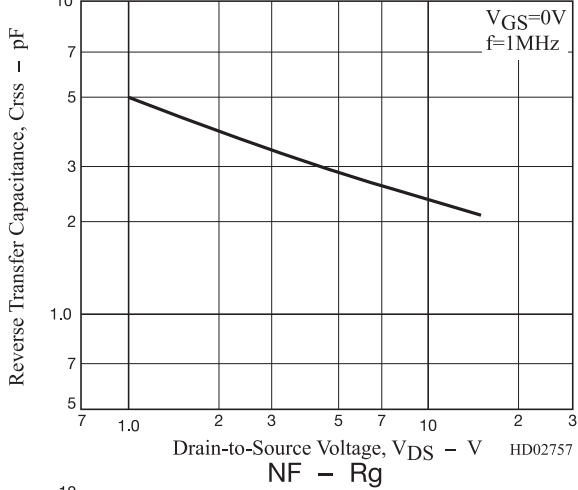
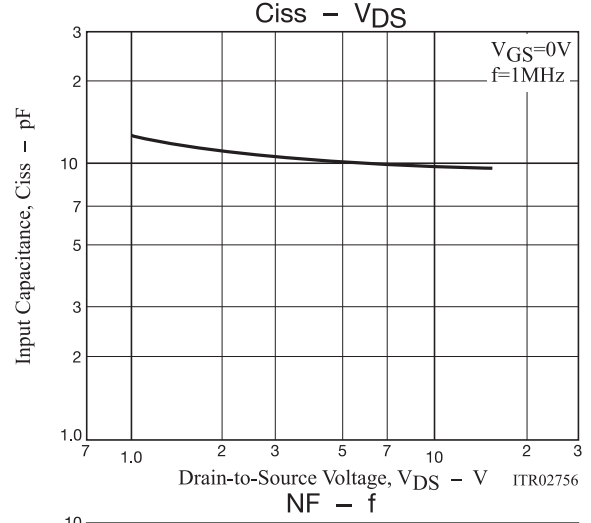
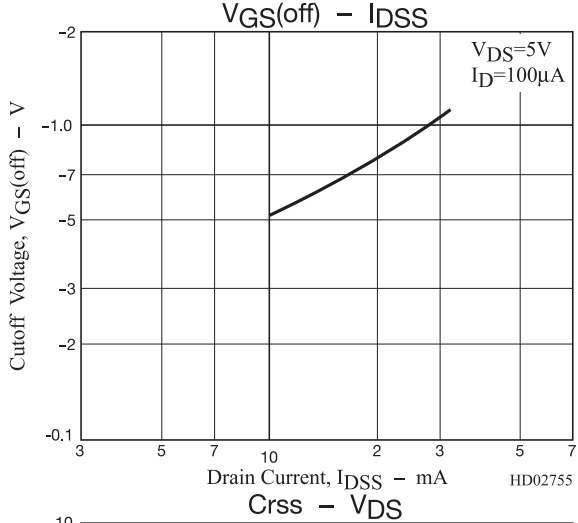
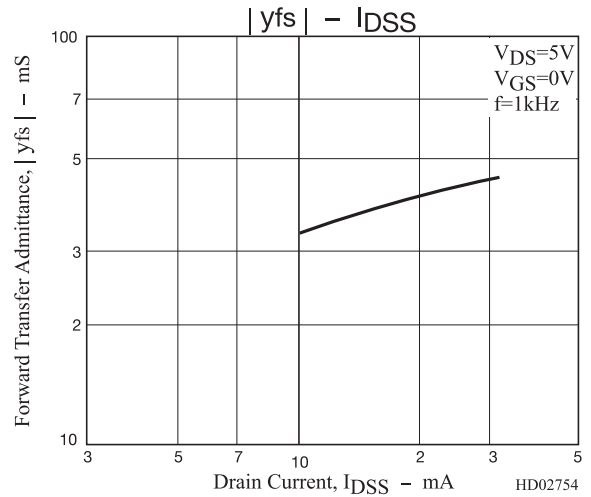
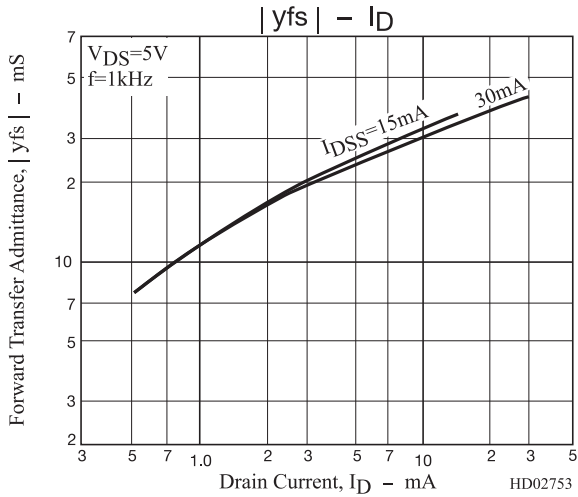
ELECTRICAL CHARACTERISTICS at Ta = 25°C (Note 2)

Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G = -10\mu A$, $V_{DS} = 0V$	-15			V
Gate Cutoff Current	I_{GSS}	$V_{GS} = -10V$, $V_{DS} = 0V$			-1.0	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 5V$, $I_D = 100\mu A$	-0.3	-0.7	-1.5	V
Drain Current	I_{DSS}	$V_{DS} = 5V$, $V_{GS} = 0V$	10		32	mA
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 5V$, $V_{GS} = 0V$, $f = 1kHz$	20	38		mS
Input Capacitance	C_{iss}	$V_{DS} = 5V$, $V_{GS} = 0V$, $f = 1MHz$		10		pF
Reverse Transfer Capacitance	C_{rss}			2.9		pF
Noise Figure	NF	$V_{DS} = 5V$, $R_g = 1k\Omega$, $I_D = 1mA$, $f = 1kHz$		1.0		dB

Note 2 : Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.



NSVJ2394SA3

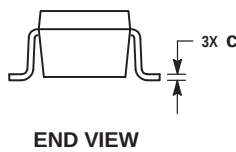
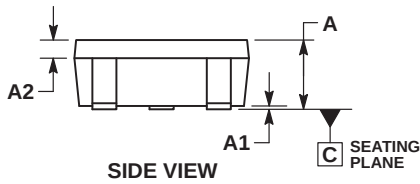
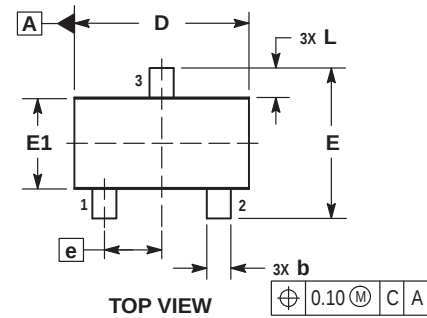


NSVJ2394SA3

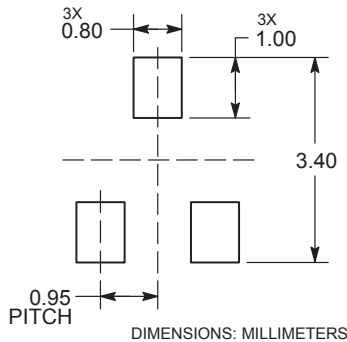
PACKAGE DIMENSIONS

unit : mm

SC-59 / CP3
CASE 318BJ
ISSUE O



RECOMMENDED SOLDERING FOOTPRINT*

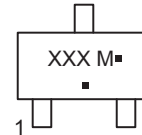


NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. DIMENSIONS D AND E1 DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS. MOLD FLASH, PROTRUSIONS, OR GATE BURRS SHALL NOT EXCEED 0.20 PER SIDE.
4. DIMENSIONS D AND E1 ARE MEASURED AT THE OUTERMOST EXTREME OF THE PLASTIC BODY.
5. DIMENSIONS b AND c APPLY TO THE FLAT SECTION OF THE LEAD BETWEEN 0.10 AND 0.20 FROM THE TIP.

DIM	MILLIMETERS	
	MIN	MAX
A	0.95	1.35
A1	0.00	0.10
A2	0.20	0.40
b	0.35	0.50
c	0.10	0.20
D	2.75	3.05
E	2.30	2.70
E1	1.35	1.65
e	0.95 BSC	
L	0.35	0.75

GENERIC MARKING DIAGRAM



XXX = Specific Device Code

M = Date Code

■ = Pb-Free Package

(Note: Microdot may be in either location)

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "■", may or may not be present.

*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

NSVJ2394SA3

ORDERING INFORMATION

Device	Marking	Package	Shipping
NSVJ2394SA3T1G	YJ	SC-59 3-Lead / CP3 (Pb-Free)	3,000 / Tape & Reel

† For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D. http://www.onsemi.com/pub_link/Collateral/BRD8011-D.PDF

ON Semiconductor and the ON logo are registered trademarks of Semiconductor Components Industries, LLC (SCILLC) or its subsidiaries in the United States and/or other countries. SCILLC owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of SCILLC's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.