

# NSVJ3557SA3

## N-Channel JFET 15V, 10 to 32mA, 35mS

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

### Typical Applications

- AM Tuner RF Amplifier
- Low Noise Amplifier

### SPECIFICATIONS

#### ABSOLUTE MAXIMUM RATINGS at Ta = 25°C (Note 1)

Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	V <sub>DSX</sub>	15	V
Gate-to-Drain Voltage	V <sub>GDS</sub>	-15	V
Gate Current	I <sub>G</sub>	10	mA
Drain Current	I <sub>D</sub>	50	mA
Allowable Power Dissipation	P <sub>D</sub>	200	mW
Operating Junction and Storage Temperature	T <sub>J</sub> , T <sub>Stg</sub>	-55 to+150	°C

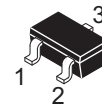
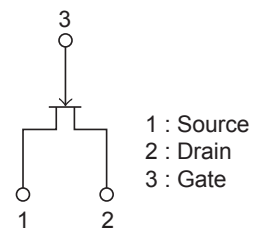
Note 1 : Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



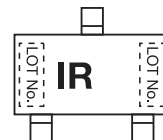
ON Semiconductor®

www.onsemi.com

### ELECTRICAL CONNECTION N-Channel



SC-59 / CP3



NSVJ3557SA3T1G

### ORDERING INFORMATION

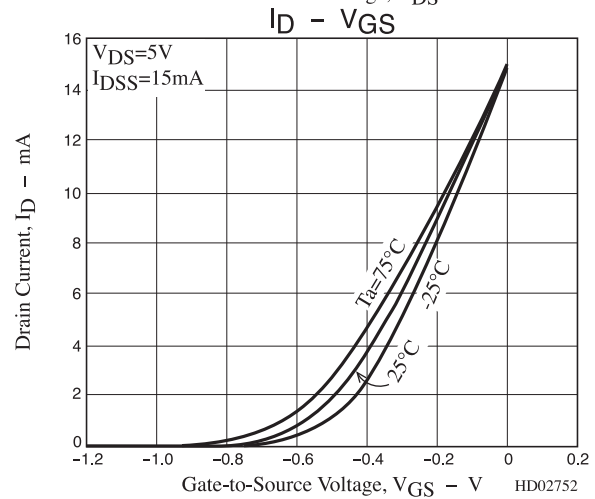
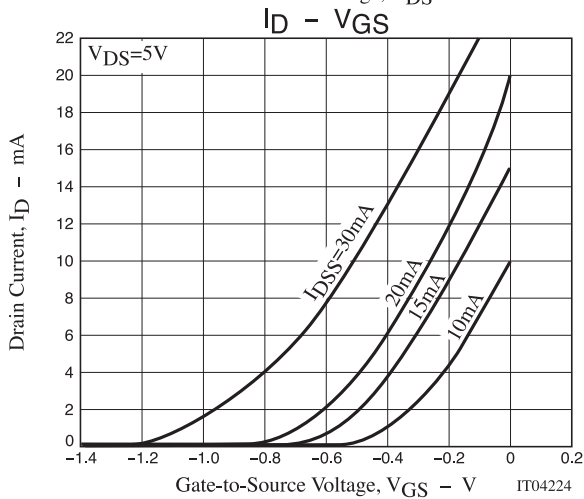
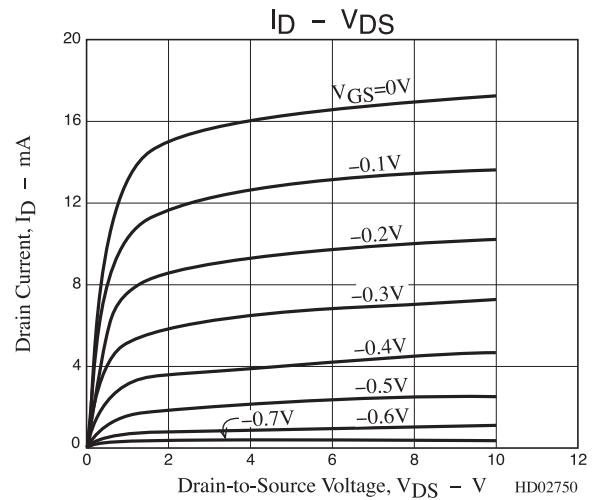
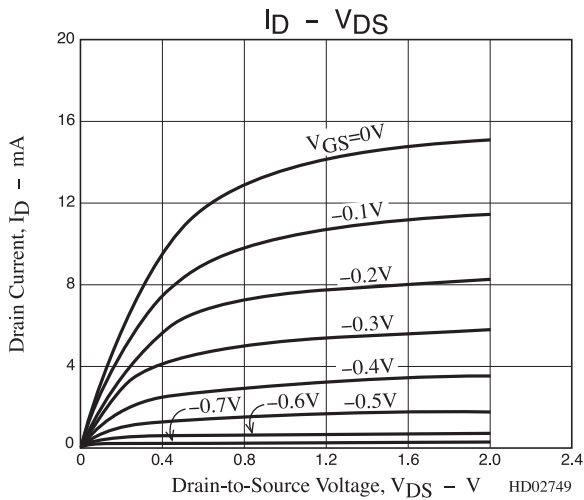
See detailed ordering and shipping information on page 5 of this data sheet

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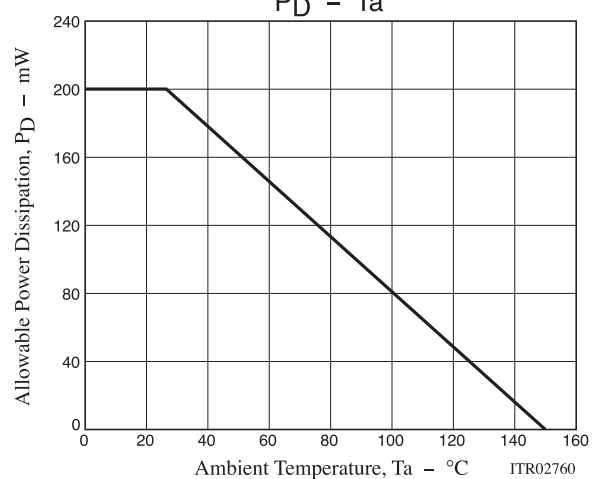
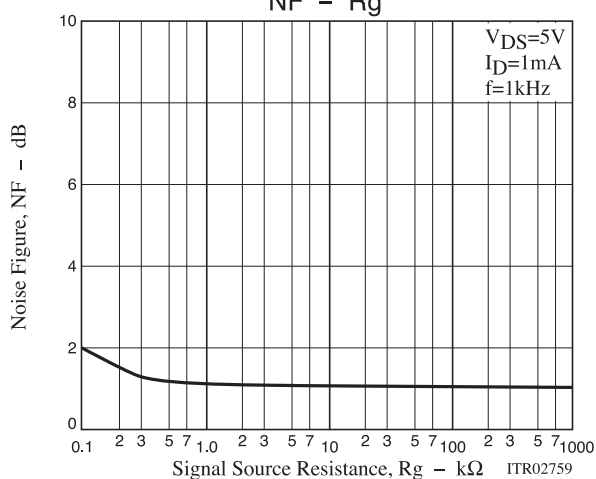
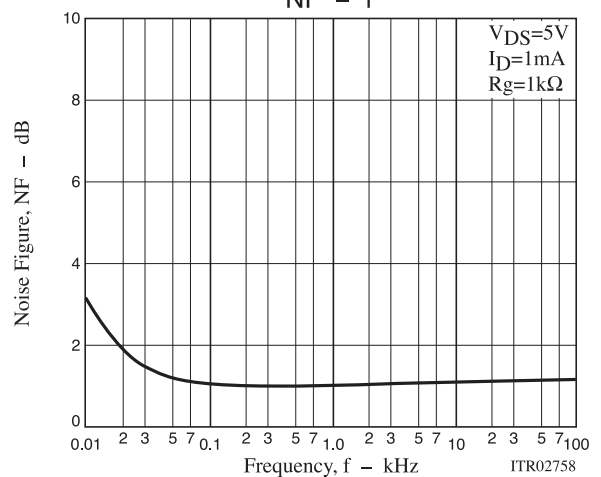
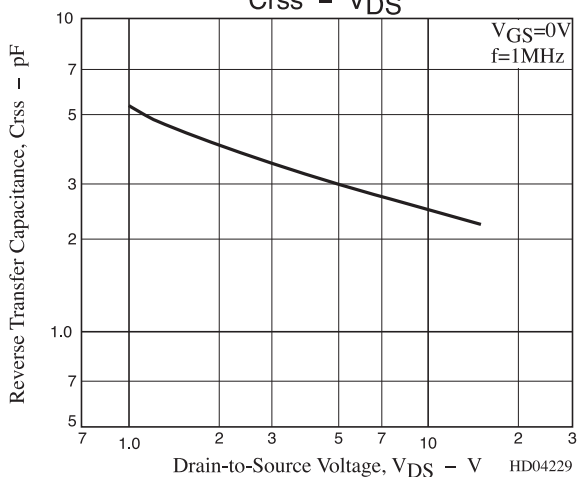
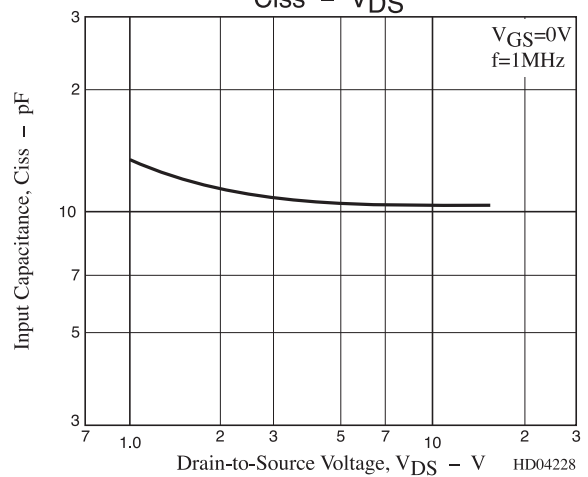
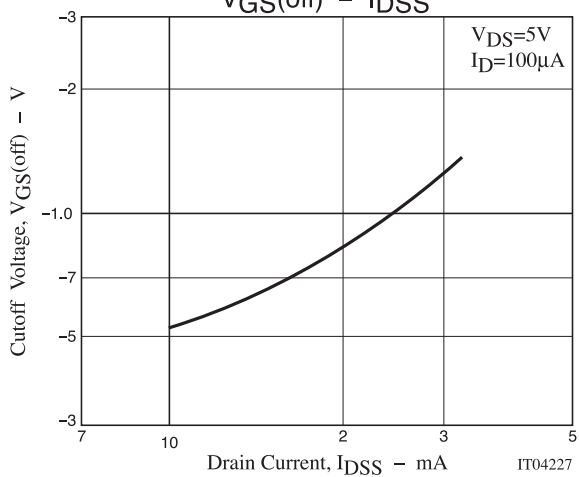
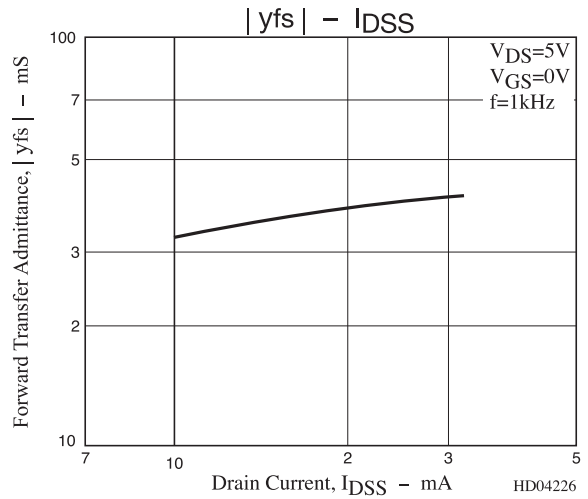
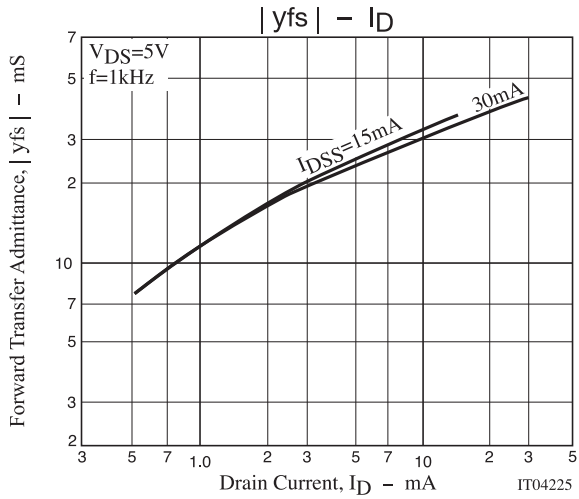
## ELECTRICAL CHARACTERISTICS at Ta = 25°C (Note 2)

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	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} $	$V_{DS} = 5V, V_{GS} = 0V, f = 1kHz$	24	35		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		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.



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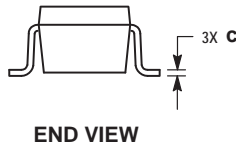
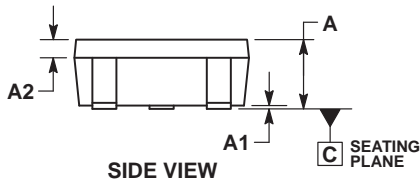
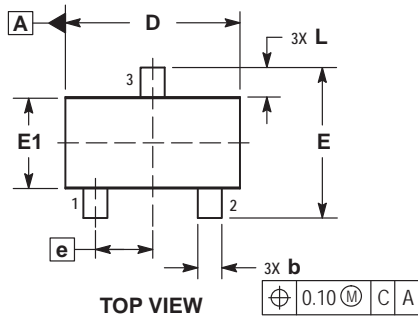


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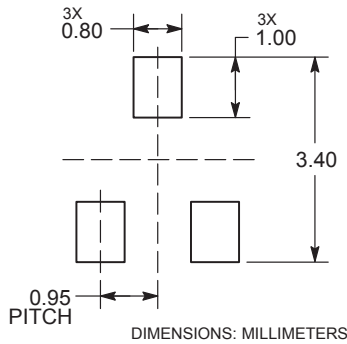
## PACKAGE DIMENSIONS

unit : mm

SC-59 / CP3  
CASE 318BJ  
ISSUE O



### RECOMMENDED SOLDERING FOOTPRINT\*

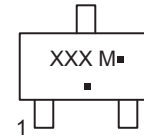


### NOTES:

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.

MILLIMETERS		
DIM	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.

# NSVJ3557SA3

## ORDERING INFORMATION

Device	Marking	Package	Shipping
NSVJ3557SA3T1G	IR	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](http://www.onsemi.com/pub_link/Collateral/BRD8011-D.PDF)

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