# **Digital Transistors (BRT)** $R1 = 22 k\Omega$ , $R2 = 22 k\Omega$

# **PNP Transistors with Monolithic Bias Resistor Network**

This series of digital transistors is designed to replace a single device and its external resistor bias network. The Bias Resistor Transistor (BRT) contains a single transistor with a monolithic bias network consisting of two resistors; a series base resistor and a baseemitter resistor. The BRT eliminates these individual components by integrating them into a single device. The use of a BRT can reduce both system cost and board space.

#### **Features**

- Simplifies Circuit Design
- Reduces Board Space
- Reduces Component Count
- S and NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

#### MAXIMUM RATINGS (T<sub>A</sub> = 25°C)

Rating	Symbol	Max	Unit
Collector-Base Voltage	V <sub>CBO</sub>	50	Vdc
Collector-Emitter Voltage	V <sub>CEO</sub>	50	Vdc
Collector Current – Continuous	I <sub>C</sub>	100	mAdc
Input Forward Voltage	V <sub>IN(fwd)</sub>	40	Vdc
Input Reverse Voltage	V <sub>IN(rev)</sub>	10	Vdc

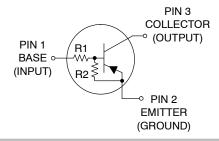
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



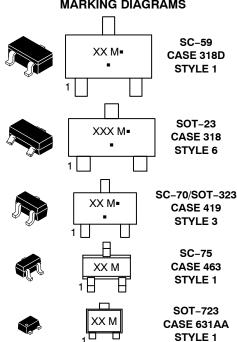
### ON Semiconductor®

www.onsemi.com

#### PIN CONNECTIONS



#### MARKING DIAGRAMS



XXX = Specific Device Code

IX MIL 1

= Date Code\* M = Pb-Free Package

(Note: Microdot may be in either location)

\*Date Code orientation may vary depending upon manufacturing location.

#### **ORDERING INFORMATION**

See detailed ordering, marking, and shipping information in the package dimensions section on page 2 of this data sheet.

SOT-1123

CASE 524AA STYLE 1

**Table 1. ORDERING INFORMATION** 

Device	Part Marking	Package	Shipping <sup>†</sup>
MUN2112T1G, NSVMUN2112T1G	6B	SC-59 (Pb-Free)	3000 / Tape & Reel
MMUN2112LT1G, NSVMMUN2112LT1G	A6B	SOT-23 (Pb-Free)	3000 / Tape & Reel
MUN5112T1G, SMUN5112T1G	6B	SC-70/SOT-323 (Pb-Free)	3000 / Tape & Reel
DTA124EET1G	6B	SC-75 (Pb-Free)	3000 / Tape & Reel
DTA124EM3T5G	6B	SOT-723 (Pb-Free)	8000 / Tape & Reel
NSBA124EF3T5G	Y	SOT-1123 (Pb-Free)	8000 / Tape & Reel

<sup>†</sup>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.

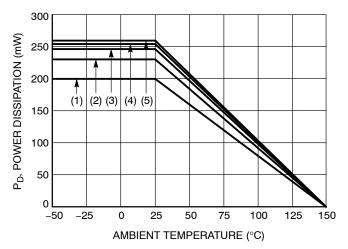


Figure 1. Derating Curve

- (1) SC-75 and SC-70/SOT-323; Minimum Pad
- (2) SC-59; Minimum Pad
- (3) SOT-23; Minimum Pad
- (4) SOT-1123; 100 mm<sup>2</sup>, 1 oz. copper trace
- (5) SOT-723; Minimum Pad

### **Table 2. THERMAL CHARACTERISTICS**

	Characteristic	Symbol	Max	Unit
THERMAL CHARACTERISTI	CS (SC-59) (MUN2112)			
Total Device Dissipation T <sub>A</sub> = 25°C (Note 1) (Note 2)		P <sub>D</sub>	230 338	mW
Derate above 25°C (Note 2)	(Note 1)		1.8 2.7	mW/°C
Thermal Resistance, Junction to Ambient	(Note 1) (Note 2)	$R_{ hetaJA}$	540 370	°C/W
Thermal Resistance, Junction to Lead (Note 2)	(Note 1)	$R_{ hetaJL}$	264 287	°C/W
Junction and Storage Temper	ature Range	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150	°C
THERMAL CHARACTERISTI	CS (SOT-23) (MMUN2112L)			
Total Device Dissipation T <sub>A</sub> = 25°C (Note 1)		P <sub>D</sub>	246	mW
(Note 2) Derate above 25°C (Note 2)	(Note 1)		400 2.0 3.2	mW/°C
Thermal Resistance, Junction to Ambient	(Note 1) (Note 2)	$R_{ hetaJA}$	508 311	°C/W
Thermal Resistance, Junction to Lead (Note 2)	(Note 1)	$R_{ hetaJL}$	174 208	°C/W
Junction and Storage Temper	ature Range	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150	°C
THERMAL CHARACTERISTI	CS (SC-70/SOT-323) (MUN5112)	•		
Total Device Dissipation T <sub>A</sub> = 25°C (Note 1)		P <sub>D</sub>	202	mW
(Note 2) Derate above 25°C (Note 2)	(Note 1)		310 1.6 2.5	mW/°C
Thermal Resistance, Junction to Ambient	(Note 1) (Note 2)	$R_{ hetaJA}$	618 403	°C/W
Thermal Resistance, Junction to Lead (Note 2)	(Note 1)	$R_{ hetaJL}$	280 332	°C/W
Junction and Storage Temper	ature Range	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150	°C
THERMAL CHARACTERISTI	CS (SC-75) (DTA124EE)			
Total Device Dissipation T <sub>A</sub> = 25°C (Note 1)		P <sub>D</sub>	200	mW
(Note 2) Derate above 25°C (Note 2)	(Note 1)		300 1.6 2.4	mW/°C
Thermal Resistance, Junction to Ambient	(Note 1) (Note 2)	$R_{ hetaJA}$	600 400	°C/W
Junction and Storage Temper	ature Range	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150	°C
THERMAL CHARACTERISTI	CS (SOT-723) (DTA124EM3)			
Total Device Dissipation T <sub>A</sub> = 25°C (Note 1)		P <sub>D</sub>	260	mW
(Note 2) Derate above 25°C (Note 2)	(Note 1)		600 2.0 4.8	mW/°C
Thermal Resistance, Junction to Ambient	(Note 1) (Note 2)	$R_{ hetaJA}$	480 205	°C/W
Junction and Storage Temper	ature Range	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150	°C

- 1. FR-4 @ Minimum Pad.
- 2. FR-4 @ 1.0 x 1.0 Inch Pad.
- FR-4 @ 100 mm<sup>2</sup>, 1 oz. copper traces, still air.
   FR-4 @ 500 mm<sup>2</sup>, 1 oz. copper traces, still air.

**Table 2. THERMAL CHARACTERISTICS** 

Characteristic	Symbol	Max	Unit
THERMAL CHARACTERISTICS (SOT-1123) (NSBA124EF3)			
Total Device Dissipation  TA = 25°C (Note 3) (Note 4)  Derate above 25°C (Note 3) (Note 4)	P <sub>D</sub>	254 297 2.0 2.4	mW mW/°C
Thermal Resistance, (Note 3) Junction to Ambient (Note 4)	$R_{ hetaJA}$	493 421	°C/W
Thermal Resistance, Junction to Lead (Note 3)	$R_{ hetaJL}$	193	°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150	°C

- 1. FR-4 @ Minimum Pad.
- FR-4 @ 1.0 x 1.0 lnch Pad.
   FR-4 @ 100 mm<sup>2</sup>, 1 oz. copper traces, still air.
   FR-4 @ 500 mm<sup>2</sup>, 1 oz. copper traces, still air.

Table 3 FLECTRICAL CHARACTERISTICS (T. - 25°C unless otherwise noted)

Characteristic	Symbol	Min	Тур	Max	Unit
OFF CHARACTERISTICS					
Collector-Base Cutoff Current (V <sub>CB</sub> = 50 V, I <sub>E</sub> = 0)	Ісво	-	-	100	nAdc
Collector-Emitter Cutoff Current (V <sub>CE</sub> = 50 V, I <sub>B</sub> = 0)	I <sub>CEO</sub>	_	-	500	nAdc
Emitter-Base Cutoff Current (V <sub>EB</sub> = 6.0 V, I <sub>C</sub> = 0)	I <sub>EBO</sub>	_	-	0.2	mAdc
Collector–Base Breakdown Voltage ( $I_C = 10 \mu A, I_E = 0$ )	V <sub>(BR)</sub> CBO	50	-	_	Vdc
Collector-Emitter Breakdown Voltage (Note 5) (I <sub>C</sub> = 2.0 mA, I <sub>B</sub> = 0)	V <sub>(BR)</sub> CEO	50	-	_	Vdc
ON CHARACTERISTICS					
DC Current Gain (Note 5) (I <sub>C</sub> = 5.0 mA, V <sub>CE</sub> = 10 V)	h <sub>FE</sub>	60	100	_	
Collector-Emitter Saturation Voltage (Note 5) (I <sub>C</sub> = 10 mA, I <sub>B</sub> = 0.3 mA)	V <sub>CE(sat)</sub>	_	-	0.25	Vdc
Input Voltage (off) (V <sub>CE</sub> = 5.0 V, I <sub>C</sub> = 100 μA)	V <sub>i(off)</sub>	_	1.2	0.8	Vdc
Input Voltage (on) (V <sub>CE</sub> = 0.3 V, I <sub>C</sub> = 5.0 mA)	V <sub>i(on)</sub>	2.5	1.7	-	Vdc
Output Voltage (on) $(V_{CC} = 5.0 \text{ V}, V_B = 2.5 \text{ V}, R_L = 1.0 \text{ k}\Omega)$	V <sub>OL</sub>	_	-	0.2	Vdc
Output Voltage (off) $(V_{CC} = 5.0 \text{ V}, V_B = 0.5 \text{ V}, R_L = 1.0 \text{ k}\Omega)$	V <sub>OH</sub>	4.9	-	_	Vdc
Input Resistor	R1	15.4	22	28.6	kΩ
Resistor Ratio	R <sub>1</sub> /R <sub>2</sub>	0.8	1.0	1.2	

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.

5. Pulsed Condition: Pulse Width = 300 msec, Duty Cycle ≤ 2%.

# TYPICAL CHARACTERISTICS MUN2112, MMUN2112L, MUN5112, DTA124EE, DTA124EM3

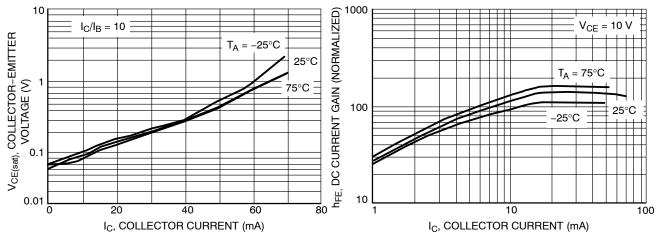


Figure 2. V<sub>CE(sat)</sub> vs. I<sub>C</sub>

Figure 3. DC Current Gain

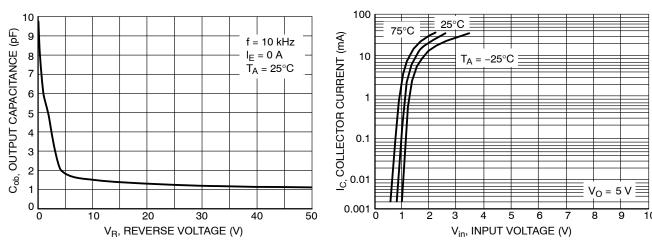


Figure 4. Output Capacitance

Figure 5. Output Current vs. Input Voltage

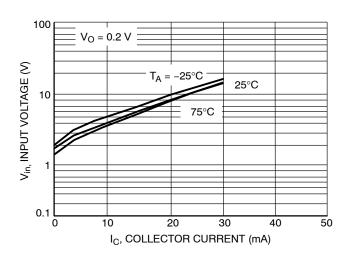


Figure 6. Input Voltage vs. Output Current

#### **TYPICAL CHARACTERISTICS - NSBA124EF3**

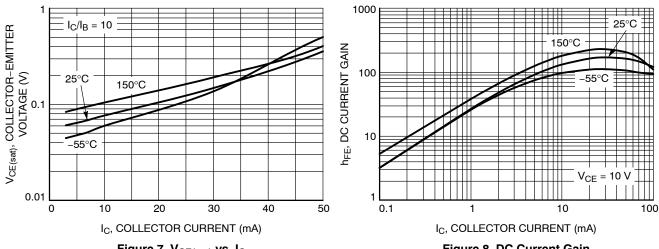


Figure 7. V<sub>CE(sat)</sub> vs. I<sub>C</sub>

Figure 8. DC Current Gain

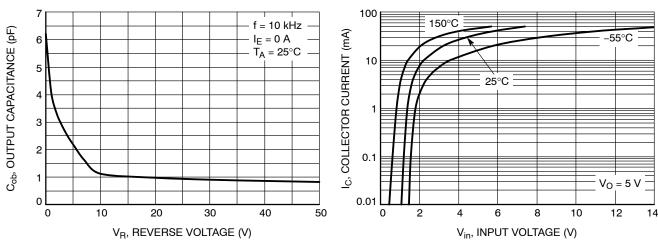


Figure 9. Output Capacitance

Figure 10. Output Current vs. Input Voltage

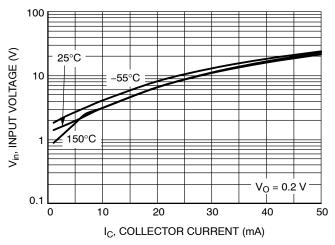


Figure 11. Input Voltage vs. Output Current

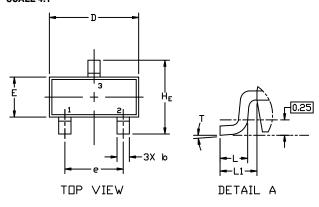


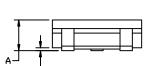


SOT-23 (TO-236) **CASE 318 ISSUE AT** 

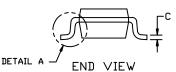
**DATE 01 MAR 2023** 

# SCALE 4:1





SIDE VIEW



#### NOTES:

- 1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M,1994.
- CONTROLLING DIMENSION: MILLIMETERS
- MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF THE BASE MATERIAL.
- DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

	MILLIM	IETERS			INCHES	
DIM	MIN.	N□M.	MAX.	MIN.	N□M.	MAX.
Α	0.89	1.00	1.11	0.035	0.039	0.044
A1	0.01	0.06	0.10	0.000	0.002	0.004
b	0.37	0.44	0.50	0.015	0.017	0.020
С	0.08	0.14	0.20	0.003	0.006	0.008
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.080
L	0.30	0.43	0.55	0.012	0.017	0.022
L1	0.35	0.54	0.69	0.014	0.021	0.027
HE	2.10	2.40	2.64	0.083	0.094	0.104
Т	0*		10°	0*		10°

### **GENERIC MARKING DIAGRAM\***

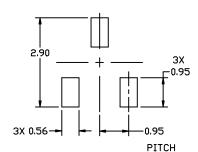


XXX = Specific Device Code

= Date Code

= Pb-Free Package

\*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. Some products may not follow the Generic Marking.



#### RECOMMENDED MOUNTING FOOTPRINT

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

#### **STYLES ON PAGE 2**

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DESCRIPTION:	SOT-23 (TO-236)		PAGE 1 OF 2

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#### **SOT-23 (TO-236)** CASE 318 ISSUE AT

**DATE 01 MAR 2023** 

STYLE 1 THRU 5: CANCELLED	STYLE 6: PIN 1. BASE 2. EMITTER 3. COLLECTOR	STYLE 7: PIN 1. EMITTER 2. BASE 3. COLLECTOR	STYLE 8: PIN 1. ANODE 2. NO CONNECTION 3. CATHODE	N	
STYLE 9:	STYLE 10:	STYLE 11: PIN 1. ANODE 2. CATHODE 3. CATHODE-ANODE	STYLE 12:	STYLE 13:	STYLE 14:
PIN 1. ANODE	PIN 1. DRAIN		PIN 1. CATHODE	PIN 1. SOURCE	PIN 1. CATHODE
2. ANODE	2. SOURCE		2. CATHODE	2. DRAIN	2. GATE
3. CATHODE	3. GATE		3. ANODE	3. GATE	3. ANODE
STYLE 15:	STYLE 16:	STYLE 17:	STYLE 18:	STYLE 19:	STYLE 20:
PIN 1. GATE	PIN 1. ANODE	PIN 1. NO CONNECTION	PIN 1. NO CONNECTION	N PIN 1. CATHODE	PIN 1. CATHODE
2. CATHODE	2. CATHODE	2. ANODE	2. CATHODE	2. ANODE	2. ANODE
3. ANODE	3. CATHODE	3. CATHODE	3. ANODE	3. CATHODE-ANODE	3. GATE
STYLE 21:	STYLE 22:	STYLE 23:	STYLE 24:	STYLE 25:	STYLE 26:
PIN 1. GATE	PIN 1. RETURN	PIN 1. ANODE	PIN 1. GATE	PIN 1. ANODE	PIN 1. CATHODE
2. SOURCE	2. OUTPUT	2. ANODE	2. DRAIN	2. CATHODE	2. ANODE
3. DRAIN	3. INPUT	3. CATHODE	3. SOURCE	3. GATE	3. NO CONNECTION
STYLE 27: PIN 1. CATHODE 2. CATHODE 3. CATHODE	STYLE 28: PIN 1. ANODE 2. ANODE 3. ANODE				

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DESCRIPTION:	SOT-23 (TO-236)		PAGE 2 OF 2

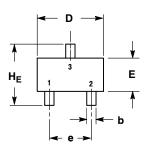
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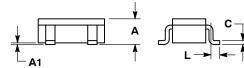




SC-59 CASE 318D-04 ISSUE H

**DATE 28 JUN 2012** 





#### **GENERIC MARKING DIAGRAM\***



XXX = Specific Device Code

= Date Code М

= Pb-Free Package\*

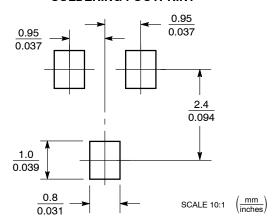
(\*Note: Microdot may be in either location)

\*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. Some products may not follow the Generic Marking.

- 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
  2. CONTROLLING DIMENSION: MILLIMETER.

	MILLIMETERS				INCHES	
DIM	MIN	NOM	MAX	MIN	NOM	MAX
Α	1.00	1.15	1.30	0.039	0.045	0.051
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.35	0.43	0.50	0.014	0.017	0.020
С	0.09	0.14	0.18	0.003	0.005	0.007
D	2.70	2.90	3.10	0.106	0.114	0.122
E	1.30	1.50	1.70	0.051	0.059	0.067
е	1.70	1.90	2.10	0.067	0.075	0.083
L	0.20	0.40	0.60	0.008	0.016	0.024
HE	2.50	2.80	3.00	0.099	0.110	0.118

#### **RECOMMENDED SOLDERING FOOTPRINT\***



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

STYLE 1: PIN 1. BASE 2. EMITTER 3. COLLECTOR	STYLE 2: PIN 1. ANODE 2. N.C. 3. CATHODE	STYLE 3: PIN 1. ANODE 2. ANODE 3. CATHODE
STYLE 4: PIN 1. CATHODE 2. N.C. 3. ANODE	STYLE 5: PIN 1. CATHODE 2. CATHODE 3. ANODE	STYLE 6: PIN 1. ANODE 2. CATHODE 3. ANODE/CATHODE

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DESCRIPTION:	SC-59		PAGE 1 OF 1

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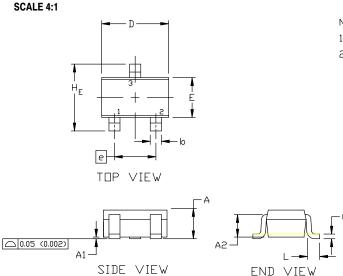
SC-70 (SOT-323) **CASE 419** ISSUE R

**DATE 11 OCT 2022** 

#### NOTES:

- 1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1982.
- 2. CONTROLLING DIMENSION: INCH

	MILLIMETERS			INCHES		
DIM	MIN.	N□M.	MAX.	MIN.	N□M.	MAX.
Α	0.80	0.90	1.00	0.032	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A2		0.70 REF	-		0.028 BS	C
b	0.30	0.35	0.40	0.012	0.014	0.016
С	0.10	0.18	0.25	0.004	0.007	0.010
D	1.80	2.00	2.20	0.071	0.080	0.087
E	1.15	1.24	1.35	0.045	0.049	0.053
е	1.20	1.30	1.40	0.047	0.051	0.055
e1	0.65 BSC			0.026 BS	C	
L	0.20	0.38	0.56	0.008	0.015	0.022
HE	2.00	2.10	2.40	0.079	0.083	0.095



#### **GENERIC MARKING DIAGRAM**

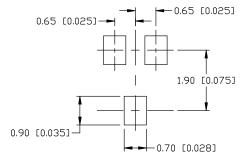


XX = Specific Device Code

Μ = Date Code

= Pb-Free Package

\*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. Some products may not follow the Generic Marking.



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

SOLDERING FOOTPRINT

STYLE 1: CANCELLED	STYLE 2: PIN 1. ANODE 2. N.C. 3. CATHODE	STYLE 3: PIN 1. BASE 2. EMITTER 3. COLLECTOR	STYLE 4: PIN 1. CATHODE 2. CATHODE 3. ANODE	STYLE 5: PIN 1. ANODE 2. ANODE 3. CATHODE	
STYLE 6:	STYLE 7:	STYLE 8:	STYLE 9:	STYLE 10:	STYLE 11:
PIN 1. EMITTER	PIN 1. BASE	PIN 1. GATE	PIN 1. ANODE	PIN 1. CATHODE	PIN 1. CATHODE
2. BASE	2. EMITTER	2. SOURCE	2. CATHODE	2. ANODE	<ol><li>CATHODE</li></ol>
<ol><li>COLLECTOR</li></ol>	<ol><li>COLLECTOR</li></ol>	3. DRAIN	<ol><li>CATHODE-ANODE</li></ol>	3. ANODE-CATHODE	<ol><li>CATHODE</li></ol>

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DESCRIPTION:	SC-70 (SOT-323)		PAGE 1 OF 1	

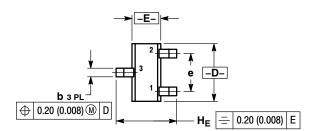
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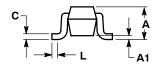




SC-75/SOT-416 **CASE 463** ISSUE G

**DATE 07 AUG 2015** 





STYLE 1: PIN 1. BASE 2. EMITTER STYLE 2: PIN 1. ANODE 2. N/C 3. CATHODE STYLE 3: PIN 1. ANODE 2. ANODE 3. COLLECTOR 3. CATHODE STYLE 4: STYLE 5: PIN 1. CATHODE 2. CATHODE PIN 1. GATE 2. SOURCE

3. DRAIN

#### **GENERIC MARKING DIAGRAM\***

3. ANODE



XX = Specific Device Code Μ = Date Code

= Pb-Free Package

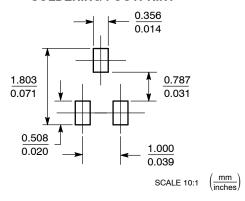
\*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "■", may or may not be present. Some products may not follow the Generic Marking.

#### NOTES

1. DIMENSIONING AND TOLERANCING PER ANSI Y14,5M, 1982. 2. CONTROLLING DIMENSION: MILLIMETER.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
Α	0.70	0.80	0.90	0.027	0.031	0.035
A1	0.00	0.05	0.10	0.000	0.002	0.004
b	0.15	0.20	0.30	0.006	0.008	0.012
С	0.10	0.15	0.25	0.004	0.006	0.010
D	1.55	1.60	1.65	0.061	0.063	0.065
E	0.70	0.80	0.90	0.027	0.031	0.035
е	1.00 BSC			0.04 BSC		
L	0.10	0.15	0.20	0.004	0.006	0.008
HE	1.50	1.60	1.70	0.060	0.063	0.067

#### RECOMMENDED **SOLDERING FOOTPRINT\***



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

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DESCRIPTION:	SC-75/SOT-416		PAGE 1 OF 1	

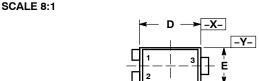
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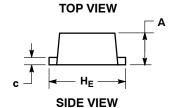


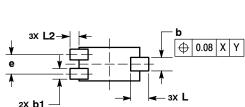


SOT-1123 CASE 524AA ISSUE C

**DATE 29 NOV 2011** 







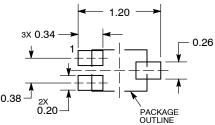
#### NOTES

- DIMENSIONING AND TOLERANCING PER ASME
- Y14.5M, 1994.
  2. CONTROLLING DIMENSION: MILLIMETERS.
- MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

  4. DIMENSIONS D AND E DO NOT INCLUDE MOLD
- FLASH, PROTRUSIONS, OR GATE BURRS.

	MILLIMETERS			
DIM	MIN MAX			
Α	0.34	0.40		
b	0.15	0.28		
b1	0.10	0.20		
С	0.07	0.17		
D	0.75	0.85		
E	0.55	0.65		
е	0.35	0.40		
HE	0.95	1.05		
L	0.185 REF			
L2	0.05	0.15		

#### **SOLDERING FOOTPRINT\***



**DIMENSIONS: MILLIMETERS** 

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

### **GENERIC MARKING DIAGRAM\***

**BOTTOM VIEW** 



Х = Specific Device Code

М = Date Code

\*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. Some products may not follow the Generic Marking.

> STYLE 4: PIN 1. CATHODE 2. CATHODE 3. ANODE STYLE 1: PIN 1. BASE STYLE 2: PIN 1. ANODE STYLE 3: PIN 1. ANODE STYLE 5: PIN 1. GATE 2. EMITTER 3. COLLECTOR 2. N/C 3. CATHODE 2. ANODE 3. CATHODE 2. SOURCE 3. DRAIN

DESCRIPTION	SOT-1123, 3-LEAD, 1.0x0.6x0.37, 0.35P		PAGE 1 OF 1	
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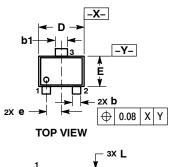
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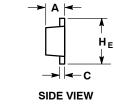


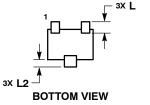


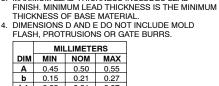
SOT-723 CASE 631AA ISSUE D

**DATE 10 AUG 2009** 







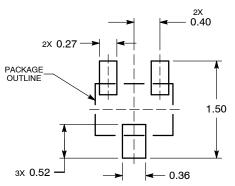


NOTES:

	INITEDIME I EI IO			
DIM	MIN	NOM	MAX	
Α	0.45	0.50	0.55	
b	0.15	0.21	0.27	
b1	0.25	0.31	0.37	
С	0.07	0.12	0.17	
D	1.15	1.20	1.25	
Е	0.75	0.80	0.85	
е	0.40 BSC			
ΗE	1.15	1.20	1.25	
L	0.29 REF			
L2	0.15	0.20	0.25	

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994. 2. CONTROLLING DIMENSION: MILLIMETERS. 3. MAXIMUM LEAD THICKNESS INCLUDES LEAD

# RECOMMENDED SOLDERING FOOTPRINT\*



DIMENSIONS: MILLIMETERS

Techniques Reference Manual, SOLDERRM/D.

# GENERIC MARKING DIAGRAM\*



XX = Specific Device Code M = Date Code

 STYLE 1:
 STYLE 2:
 STYLE 3:
 STYLE 4:
 STYLE 5:

 PIN 1. BASE
 PIN 1. ANODE
 PIN 1. ANODE
 PIN 1. CATHODE
 PIN 1. GATE

 2. EMITTER
 2. N/C
 2. ANODE
 2. CATHODE
 2. CATHODE
 2. SOURCE

 3. COLLECTOR
 3. CATHODE
 3. CATHODE
 3. DRAIN

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DESCRIPTION:	SOT-723		PAGE 1 OF 1	

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<sup>\*</sup>For additional information on our Pb-Free strategy and soldering details, please download the **onsemi** Soldering and Mounting

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