Dual NPN Bias Resistor Transistors R1 = 10 k\Omega, R2 = 47 k\Omega

NPN Transistors with Monolithic Bias Resistor Network

MUN5214DW1, NSBC114YDXV6, NSBC114YDP6

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 base-emitter 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_A = 25°C, common for Q₁ and Q₂, unless otherwise noted)

Rating	Symbol	Max	Unit
Collector-Base Voltage	V _{CBO}	50	Vdc
Collector-Emitter Voltage	V _{CEO}	50	Vdc
Collector Current – Continuous	Ι _C	100	mAdc
Input Forward Voltage	V _{IN(fwd)}	40	Vdc
Input Reverse Voltage	V _{IN(rev)}	6	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.

ORDERING INFORMATION

Device	Package	Shipping [†]
MUN5214DW1T1G, SMUN5214DW1T1G*, NSVMUN5214DW1T2G*	SOT-363	3,000 / Tape & Reel
NSVMUN5214DW1T3G*	SOT-363	10,000 / Tape & Reel
NSBC114YDXV6T1G NSVBC114YDXV6T1G*	SOT-563	4,000 / Tape & Reel
NSBC114YDXV6T5G	SOT-563	8,000 / Tape & Reel
NSBC114YDP6T5G	SOT-963	8,000 / Tape & Reel

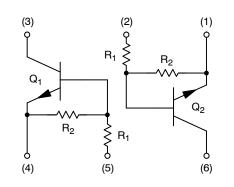
⁺For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.



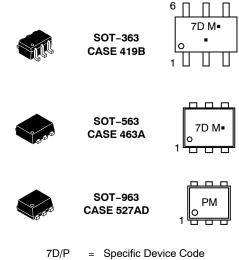
ON Semiconductor®

www.onsemi.com

PIN CONNECTIONS



MARKING DIAGRAMS



M = Date Code* Pb-Free Package

(Note: Microdot may be in either location)

*Date Code orientation may vary depending upon manufacturing location.

THERMAL CHARACTERISTICS

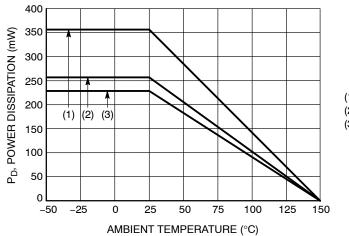
	Characteristic	Symbol	Max	Unit
MUN5214DW1 (SOT-363) ON	E JUNCTION HEATED			
Total Device Dissipation $T_A = 25^{\circ}C$ (Note 1) (Note 2) Derate above 25^{C} (Note 2)	(Note 1)	PD	187 256 1.5 2.0	mW mW/°C
Thermal Resistance, Junction to Ambient	(Note 1) (Note 2)	R _{θJA}	670 490	°C/W
MUN5214DW1 (SOT-363) BC	TH JUNCTION HEATED (Note 3)			
Total Device Dissipation $T_A = 25^{\circ}C$ (Note 1) (Note 2) Derate above 25^{C} (Note 2)	(Note 1)	PD	250 385 2.0 3.0	mW mW/°C
Thermal Resistance, Junction to Ambient (Note 2)	(Note 1)	R _{θJA}	493 325	°C/W
Thermal Resistance, Junction to Lead (Note 1) (Note 2)		R _{θJL}	188 208	°C/W
Junction and Storage Temper	ature Range	T _J , T _{stg}	-55 to +150	°C
NSBC114YDXV6 (SOT-563)	ONE JUNCTION HEATED	· · · · · · · · · · · · · · · · · · ·	· · · ·	
Total Device Dissipation $T_A = 25^{\circ}C$ (Note 1) Derate above $25^{\circ}C$	(Note 1)	PD	357 2.9	mW mW/°C
Thermal Resistance, Junction to Ambient	(Note 1)	R _{θJA}	350	°C/W
NSBC114YDXV6 (SOT-563) E	BOTH JUNCTION HEATED (Note 3)	· · · · · · · · · · · · · · · · · · ·	· · · ·	
$\begin{array}{l} \mbox{Total Device Dissipation} \\ T_A = 25^\circ C \qquad (Note 1) \\ \mbox{Derate above } 25^\circ C \end{array}$	(Note 1)	P _D	500 4.0	mW mW/°C
Thermal Resistance, Junction to Ambient	(Note 1)	R _{θJA}	250	°C/W
Junction and Storage Temper	ature Range	T _J , T _{stg}	-55 to +150	°C
NSBC114YDP6 (SOT-963) OI	NE JUNCTION HEATED			
Total Device Dissipation $T_A = 25^{\circ}C$ (Note 4) (Note 5) Derate above 25^{C} (Note 5)	(Note 4)	PD	231 269 1.9 2.2	MW mW/°C
Thermal Resistance, Junction to Ambient (Note 5)	(Note 4)	R _{θJA}	540 464	°C/W
NSBC114YDP6 (SOT-963) BC	OTH JUNCTION HEATED (Note 3)			
$\begin{array}{l} \mbox{Total Device Dissipation} \\ T_A = 25^\circ C \qquad (Note 4) \\ (Note 5) \\ \mbox{Derate above } 25^\circ C \\ (Note 5) \end{array}$	(Note 4)	PD	339 408 2.7 3.3	MW mW/°C
Thermal Resistance, Junction to Ambient (Note 5)	(Note 4)	R _{0JA}	369 306	°C/W
Junction and Storage Temper	ature Bange	T _J , T _{stg}	-55 to +150	°C

FR-4 @ Minimum Fad.
 FR-4 @ 1.0 × 1.0 Inch Pad.
 Both junction heated values assume total power is sum of two equally powered channels.
 FR-4 @ 100 mm², 1 oz. copper traces, still air.
 FR-4 @ 500 mm², 1 oz. copper traces, still air.

ELECTRICAL CHARACTERISTICS (T _A = 25°C, common for Q ₁ and Q ₂ , unless	otherwise noted)
--	------------------

Characteristic	Symbol	Min	Тур	Max	Unit
OFF CHARACTERISTICS					•
Collector-Base Cutoff Current $(V_{CB} = 50 \text{ V}, I_E = 0)$	I _{СВО}	-	-	100	nAdc
Collector-Emitter Cutoff Current $(V_{CE} = 50 \text{ V}, I_B = 0)$	I _{CEO}	-	-	500	nAdc
Emitter-Base Cutoff Current $(V_{EB} = 6.0 \text{ V}, I_C = 0)$	I _{EBO}	-	-	0.2	mAdc
Collector-Base Breakdown Voltage $(I_C = 10 \ \mu A, I_E = 0)$	V _{(BR)CBO}	50	-	-	Vdc
Collector-Emitter Breakdown Voltage (Note 6) $(I_{C} = 2.0 \text{ mA}, I_{B} = 0)$	V _{(BR)CEO}	50	_	_	Vdc
ON CHARACTERISTICS					
DC Current Gain (Note 6) (I _C = 5.0 mA, V _{CE} = 10 V)	h _{FE}	80	140	_	
Collector-Emitter Saturation Voltage (Note 6) ($I_c = 10 \text{ mA}, I_B = 0.3 \text{ mA}$)	V _{CE(sat)}	-	-	0.25	V
Input Voltage (Off) (V _{CE} = 5.0 V, I _C = 100 μA)	V _{i(off)}	-	0.7	0.3	Vdc
Input Voltage (On) (V _{CE} = 0.2 V, I _C = 1.0 mA)	V _{i(on)}	1.4	0.8	_	Vdc
Output Voltage (On) ($V_{CC} = 5.0 \text{ V}, V_B = 2.5 \text{ V}, R_L = 1.0 \text{ k}\Omega$)	V _{OL}	_	_	0.2	Vdc
Output Voltage (Off) (V_{CC} = 5.0 V, V_B = 0.5 V, R_L = 1.0 k Ω)	V _{OH}	4.9	_	_	Vdc
Input Resistor	R1	7	10	13	kΩ
Resistor Ratio	R ₁ /R ₂	0.17	0.21	0.25	

6. Pulsed Condition: Pulse Width = 300 ms, Duty Cycle \leq 2%.

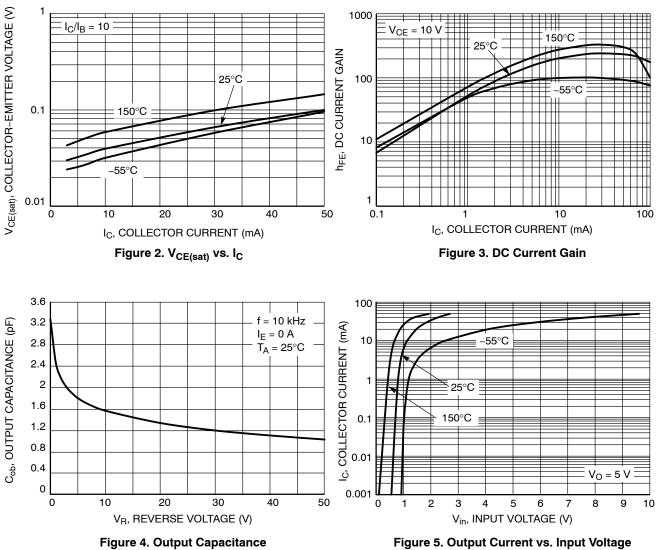


(1) SOT–363; 1.0×1.0 Inch Pad

(2) SOT-563; Minimum Pad

(3) SOT-963; 100 mm², 1 oz. Copper Trace

Figure 1. Derating Curve



TYPICAL CHARACTERISTICS MUN5214DW1, NSBC114YDXV6

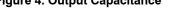


Figure 5. Output Current vs. Input Voltage

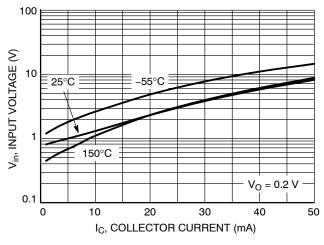
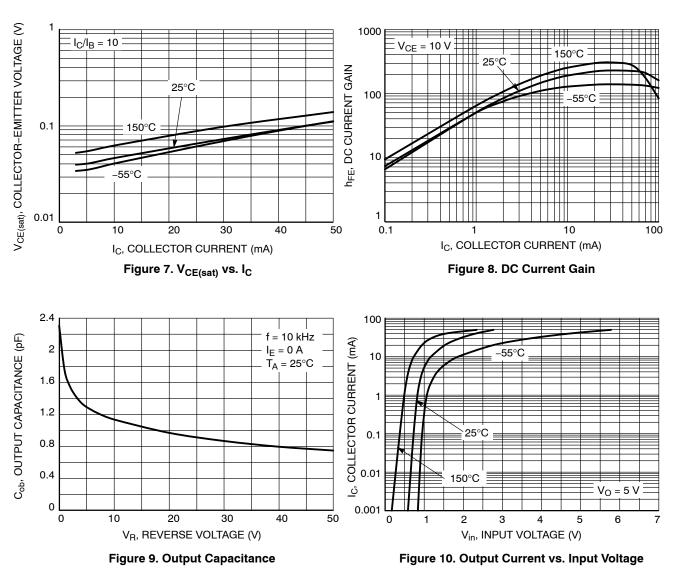
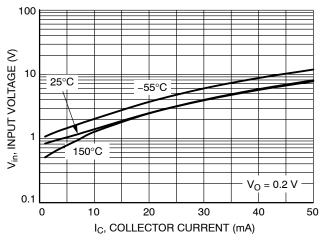


Figure 6. Input Voltage vs. Output Current





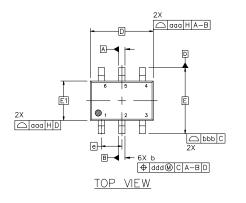




semi

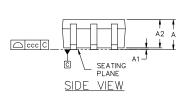
SC-88 2.00x1.25x0.90, 0.65P CASE 419B-02 **ISSUE Z**

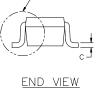
DATE 18 APR 2024



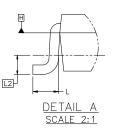


- DIMENSIONING AND TOLERANCING CONFORM TO ASME 1. Y14.5-2018.
- 2.
- ALL DIMENSION ARE IN MILLIMETERS. DIMENSIONS D AND E1 DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS. MOLD FLASH, PROTRUSIONS, OR GATE BURRS SHALL NOT EXCEED 0.20 3. PER END.
- 4. DIMENSIONS D AND E1 AT THE OUTERMOST EXTREMES OF
- DATUMS A AND B ARE DETERMINED AT DATUM H. 5.
- DIMENSIONS & AND C APPLY TO THE FLAT SECTION OF THE LEAD BETWEEN 0.08 AND 0.15 FROM THE TIP. 6.
- DIMENSION & DOES NOT INCLUDE DAMBAR PROTRUSION. 7 ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.08 TOTAL IN EXCESS OF DIMENSION & AT MAXIMUM MATERIAL CONDITION. THE DAMBAR CANNOT BE LOCATED ON THE LOWER RADIUS OF THE FOOT.





DETAIL A



	MILLIMETERS				
DIM	MIN.	NOM.	MAX.		
A			1.10		
A1	0.00		0.10		
A2	0.70	0.90	1.00		
b	0.15	0.20	0.25		
С	0.08	0.15	0.22		
D		2.00 BSC	;		
E	2.10 BSC				
E1	1.25 BSC				
е		0.65 BSC)		
L	0.26	0.36	0.46		
L2	0.15 BSC				
aaa	0.15				
bbb	0.30				
ссс	0.10				
ddd		0.10			

6X 0.66 6X 0.30-2.50 0.65 PITCH

RECOMMENDED MOUNTING FOOTPRINT*

FOR ADDITIONAL INFORMATION ON OUR Pb-FREE STRATEGY AND SOLDERING DETAILS, PLEASE DOWNLOAD THE ONSEMI SOLDERING AND MOUNTING TECHNIQUES REFERENCE MANUAL, SOLDERRM/D.

XXX = Specific Device Code = Date Code* Μ

GENERIC **MARKING DIAGRAM***

XXXM-

. 0

6

= Pb-Free Package

(Note: Microdot may be in either location)

*Date Code orientation and/or position may vary depending upon manufacturing 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.

STYLES ON PAGE 2

DOCUMENT NUMBER:	98ASB42985B	B Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.				
DESCRIPTION:	SC-88 2.00x1.25x0.90, 0.65P		PAGE 1 OF 2			
onsemi and ONSEMi are trademarks of Semiconductor Components Industries, LLC dba onsemi or its subsidiaries in the United States and/or other countries. onsemi reserves the right to make changes without further notice to any products herein. onsemi makes no warranty, representation or guarantee regarding the suitability of its products for any particular						

purpose, nor does onsemi 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. onsemi does not convey any license under its patent rights nor the rights of others.

SC-88 2.00x1.25x0.90, 0.65P CASE 419B-02 ISSUE Z

DATE 18 APR 2024

STYLE 1: PIN 1. EMITTER 2 2. BASE 2 3. COLLECTOR 1 4. EMITTER 1 5. BASE 1 6. COLLECTOR 2	STYLE 2: CANCELLED	STYLE 3: CANCELLED	STYLE 4: PIN 1. CATHODE 2. CATHODE 3. COLLECTOR 4. EMITTER 5. BASE 6. ANODE	STYLE 5: PIN 1. ANODE 2. ANODE 3. COLLECTOR 4. EMITTER 5. BASE 6. CATHODE	STYLE 6: PIN 1. ANODE 2 2. N/C 3. CATHODE 1 4. ANODE 1 5. N/C 6. CATHODE 2
STYLE 7: PIN 1. SOURCE 2 2. DRAIN 2 3. GATE 1 4. SOURCE 1 5. DRAIN 1 6. GATE 2	STYLE 8: CANCELLED	STYLE 9: PIN 1. EMITTER 2 2. EMITTER 1 3. COLLECTOR 1 4. BASE 1 5. BASE 2 6. COLLECTOR 2	STYLE 10: PIN 1. SOURCE 2 2. SOURCE 1 3. GATE 1 4. DRAIN 1 5. DRAIN 2 6. GATE 2	STYLE 11: PIN 1. CATHODE 2 2. CATHODE 2 3. ANODE 1 4. CATHODE 1 5. CATHODE 1 6. ANODE 2	STYLE 12: PIN 1. ANODE 2 2. ANODE 2 3. CATHODE 1 4. ANODE 1 5. ANODE 1 6. CATHODE 2
STYLE 13:	STYLE 14:	STYLE 15:	STYLE 16:	STYLE 17:	STYLE 18:
PIN 1. ANODE	PIN 1. VREF	PIN 1. ANODE 1	PIN 1. BASE 1	PIN 1. BASE 1	PIN 1. VIN1
2. N/C	2. GND	2. ANODE 2	2. EMITTER 2	2. EMITTER 1	2. VCC
3. COLLECTOR	3. GND	3. ANODE 3	3. COLLECTOR 2	3. COLLECTOR 2	3. VOUT2
4. EMITTER	4. IOUT	4. CATHODE 3	4. BASE 2	4. BASE 2	4. VIN2
5. BASE	5. VEN	5. CATHODE 2	5. EMITTER 1	5. EMITTER 2	5. GND
6. CATHODE	6. VCC	6. CATHODE 1	6. COLLECTOR 1	6. COLLECTOR 1	6. VOUT1
STYLE 19:	STYLE 20:	STYLE 21:	STYLE 22:	STYLE 23:	STYLE 24:
PIN 1. I OUT	PIN 1. COLLECTOR	PIN 1. ANODE 1	PIN 1. D1 (i)	PIN 1. Vn	PIN 1. CATHODE
2. GND	2. COLLECTOR	2. N/C	2. GND	2. CH1	2. ANODE
3. GND	3. BASE	3. ANODE 2	3. D2 (i)	3. Vp	3. CATHODE
4. V CC	4. EMITTER	4. CATHODE 2	4. D2 (c)	4. N/C	4. CATHODE
5. V EN	5. COLLECTOR	5. N/C	5. VBUS	5. CH2	5. CATHODE
6. V REF	6. COLLECTOR	6. CATHODE 1	6. D1 (c)	6. N/C	6. CATHODE
STYLE 25:	STYLE 26:	STYLE 27:	STYLE 28:	STYLE 29:	STYLE 30:
PIN 1. BASE 1	PIN 1. SOURCE 1	PIN 1. BASE 2	PIN 1. DRAIN	PIN 1. ANODE	PIN 1. SOURCE 1
2. CATHODE	2. GATE 1	2. BASE 1	2. DRAIN	2. ANODE	2. DRAIN 2
3. COLLECTOR 2	3. DRAIN 2	3. COLLECTOR 1	3. GATE	3. COLLECTOR	3. DRAIN 2
4. BASE 2	4. SOURCE 2	4. EMITTER 1	4. SOURCE	4. EMITTER	4. SOURCE 2
5. EMITTER	5. GATE 2	5. EMITTER 2	5. DRAIN	5. BASE/ANODE	5. GATE 1
6. COLLECTOR 1	6. DRAIN 1	6. COLLECTOR 2	6. DRAIN	6. CATHODE	6. DRAIN 1

Note: Please refer to datasheet for style callout. If style type is not called out in the datasheet refer to the device datasheet pinout or pin assignment.

DOCUMENT NUMBER:	98ASB42985B	5B Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.				
DESCRIPTION:	SC-88 2.00x1.25x0.90, 0.6	C-88 2.00x1.25x0.90, 0.65P				

onsemi and ONSEMI are trademarks of Semiconductor Components Industries, LLC dba onsemi or its subsidiaries in the United States and/or other countries. onsemi reserves the right to make changes without further notice to any products herein. onsemi makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does onsemi 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. onsemi does not convey any license under its patent rights nor the rights of others.

MECHANICAL CASE OUTLINE PACKAGE DIMENSIONS



ONSEMI

DATE 15 FEB 2024 NTES 1.1 ENDESCONG AND TOLERANCING CONFORM TO ASME 1.2 ENDESCONG AND TOLERANCING CONFORMATION TOLERANCING 2. ENDESCONG AND TOLERANCING CONFORMATION TOLERANCING 2. ENDESCONG AND TOLERANCING CONFORMATION TOLERANCING 2. ENDESCONG AND TOLERANCING TOLERANCING TOLERANCING TOLERANCING 2. ENDESCONG AND TOLERANCING TOLERANCING TOLERANCING 2. ENDESCONG AND TOLERANCING TOLERANCING TOLERANCING TOLERANCING TOLERANCING TOLERANCING TOLERANCING 2. ENDESCONG AND TOLERANCING TOLERANCING 2. ENDESCONG AND TOLERANCING TOLERANCING TOLERANCING TOLERANCI				ISSUE J				
 1. DIMENSIONING AND TOLERANDING CONFORM TO ASME 14.5-2018. ALL DIMENSION ARE IN MULLIMETERS. ANAXIMUM LEAD THICKNESS IS INCLUDES LEAD FINISH HICKNESS MINIKUM LEAD THICKNESS IS THE MINIMUM HICKNESS MINIMUM LEAD THICKNESS IS THE MINIMUM THE MINIMUM THE MINIMUM THE MINIMUM THE MINIMUM THE MINIMUM HICKNESS MINIMUM LEAD THICKNESS IS THE MINIMUM THE MINI				100020			DA	TE 15 FEB 2024
 Y14.5-2018. ALL DIKINSION ARE IN MILLIMETERS. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS OF BASE MATERIAL. THICKNESS OF BASE MATERIAL. THIC				NOTES:				
 2. ALL DIMÉNSION ARE. IN MILLIMETERS. 3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS OF BASE MATERIAL. 3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS OF BASE MATERIAL. 3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS OF BASE MATERIAL. 3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS OF BASE MATERIAL. 3. MAXIMUM LEAD THICKNESS OF BASE MATERIAL. 3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS OF BASE MATERIAL. 3. MAXIMUM LEAD THICKNESS OF BASE MATERIAL. 3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS OF BASE MATERIAL. 3. MAXIMUM LEAD THICKNESS OF BASE MATERIAL. 4. MAXIMUM LEAD THICKNESS OF BASE MATERIAL. 4. MAXIMUM LEAD THICKNESS OF BASE MATERIAL. 4. MAXIMUM LEAD THICKNESS OF BASE MATERIAL. 5. MAXIMUM LEAD THICKNESS OF BASE MATERIAL. 5.						RANCING	CONFORM	M TO ASME
THICKNESS MINIMUM LEAD THICKNESS IS THE MINIMUM HICKNESS OF BASE MATERIAL. THICKNESS OF BASE MATERIAL						MILLIMET	ERS.	
PIN 1 PIN 1 <td< th=""><th></th><th></th><th></th><th>THICKNESS</th><th>. MINIMUM LEA</th><th>AD THICK</th><th></th><th></th></td<>				THICKNESS	. MINIMUM LEA	AD THICK		
PIN 1 FIN 1 <th< th=""><th>-</th><th>D</th><th>A -</th><th> - − 6X </th><th>DIM</th><th>М</th><th>ILLIMETE</th><th>RS</th></th<>	-	D	A -	 - − 6X	DIM	М	ILLIMETE	RS
PIN 1 0 <th></th> <th>B</th> <th></th> <th></th> <th></th> <th>MIN.</th> <th>NDM.</th> <th>MAX.</th>		B				MIN.	NDM.	MAX.
PIN 1 Image: Construction of the second schedule schedule of the second schedule of the sec					А	0.50	0.55	0.60
C 0.08 0.13 0.18 D D 0.10 1.20 1.30 D D 0.10 0.20 0.30 PIN 1 EMTTRE 1 STYLE 3 FIVE 4 0.10 0.20 0.30 STYLE 1 PIN 1 EMTTRE 1 STYLE 3 AMDE 4 0.30 0.30 0.30 0.30 J AMDE 5 SASE 1 SAME 7 SAME 7 <th></th> <th>•</th> <th></th> <th></th> <th>b</th> <th>0.17</th> <th>0.22</th> <th>0.27</th>		•			b	0.17	0.22	0.27
STYLE I: TOP VIEW STYLE 3: TOP VIEW STYLE 3: SIDE VIEW D 1.50 1.60 1.70 STYLE I: TOP VIEW SIDE VIEW SIDE VIEW D 1.50 1.60 1.70 STYLE I: TOP VIEW SIDE VIEW SIDE VIEW D 1.50 1.60 1.70 STYLE I: TOP VIEW STYLE 3: SIDE VIEW SIDE VIEW D 1.50 1.60 1.70 STYLE I: TOP VIEW STYLE 3: SIDE VIEW SIDE VIEW D 1.50 1.60 1.70 STYLE 1: SIDE VIEW SIDE VIEW SIDE VIEW D 0.30	REFERENCE				C	80.0	0.13	0.18
STYLE 1: TOP_WEW SIDE_VIEW Image: Construct of the second se	الک ب				D	1.50	1.60	1.70
Image: Style is top: WEW SIDE VIEW Image: Side VIEW STYLE is top: WEW SIDE VIEW Image: Side VIEW STYLE is top: WEW SIDE VIEW Image: Side VIEW STYLE is top: WEW SIDE VIEW Image: Side VIEW STYLE is top: WEW SIDE VIEW Image: Side VIEW STYLE is top: WEW SIDE VIEW Image: Side VIEW STYLE is top: Side VIEW SIDE VIEW Image: Side VIEW STYLE is top: Side VIEW SIDE VIEW Image: Side VIEW STYLE is top: Side VIEW SIDE VIEW Image: Side VIEW STYLE is top: Side VIEW SIDE VIEW Image: Side VIEW STYLE is top: Side VIEW Side VIEW Side VIEW STYLE 4: STYLE 5: STYLE 5: STYLE 6: SIDE VIEW STYLE 6: Side VIEW STYLE 4: SIDE VIEW SIDE VIEW Side VIEW SIDE VIEW SIDE Cathodic 2: Contribute Side VIEW SIDE Cathodic 2: Contribute Side VIEW Side VIEW STYLE 4: STYLE 5: STYLE 6: SIDE VIEW Side VIEW Side VIEW SIDE VIEW Side VIEW Side VIEW Side VIEW Side Cathodic 2: Contribute Side VIEW Side VIEW	L				E	1.10	1.20	1.30
TOP VIEW SIDE VIEW TOP VIEW SIDE VIEW TOP VIEW SIDE VIEW TOP VIEW SIDE VIEW STATUSE 1 STYLE 2: PIN 1 EMITTER 1 PIN 1 EMITTER 1 2 BASE 2 STATUSE 1: 3 BASE 2 S BASE 1: 3 BASE 2 S BASE 1: 4 MUTTER 2 STYLE 5: 5 COLLECTOR 1: CATHODE 2: 4 COLLECTOR 1: CATHODE 2: 4 COLLECTOR 1: CATHODE 2: 3 BASE 2: S BASE 1: 5 COLLECTOR 1: CATHODE 2: 4 COLLECTOR 1: CATHODE 2: 4 COLLECTOR 1: CATHODE 2: 4 COLLECTOR 2: CATHODE 2: 5 COLLECTOR 1: CATHODE 2: 6 COLLECTOR 2: CATHODE 3: 7 COLLECTOR 2: CATHODE 3: 8 COLLECTOR 2: CATHODE 3: 9 COLLECTOR 4: STYLE 5: 9 COLLECTOR 5: STYLE 6: 1: CATHODE 3: 2: CATHODE 3: 3: CATHODE 3: 4: ANDE 4: CATHODE 3: 5: COLLECTOR 6: 6: CATHODE 3: 6: CATHODE 3: 6: CATHODE 3:				℃ ─► ┝━─	e		0.50 BSC	
STYLE 1: STYLE 2: STYLE 3: PIN 1: EMITTER 1 PIN 1: EMITTER 1 PIN 1: CATHODE 1 2: BASE 1 2: CATHODE 1 2: CATHODE 2 3: COLLECTOR 2 4: CATHODE 2 4: CATHODE 2 4: EMITTER 2 4: CATHODE 2 4: CATHODE 2 5: BASE 2 5: BASE 1 5: CATHODE 2 6: COLLECTOR 1 6: COLLECTOR 1 6: ANDE/ANDDE 2 7: STYLE 4: STYLE 5: STYLE 6: 9: N 1: CATHODE 2: CATHODE 2: 2: COLLECTOR 1 6: COLLECTOR 2 3: BASE 2: 3: ANDE 3: COLLECTOR 1 6: COLLECTOR 1 4: EMITTER 3: STYLE 5: 5: COLLECTOR 1 6: CATHODE 2: 6: COLLECTOR 3: CATHODE 2: 7: COLLECTOR 3: CATHODE 4: 8: COLLECTOR 3: CATHODE 4: 9: N 1: CATHODE 4: STYLE 9: 9: N 1: CATHODE 4: STYLE 9: 10: 1 CATHODE 4: 10: 1 CATHODE 5: 2: ANDDE CATHODE 4: 3: CATHODE 4: CATHODE 5: 3: CATHODE 5: CATHODE 5: 3: CATHODE 6:<					н	1.50	1.60	1.70
STYLE i STYLE 2: STYLE 3: PIN 1. EMITTER 1 PIN 1. EMITTER 2 STYLE 3: 3. COLLECTOR 2 3. BASE 2 3. ANDE/ANDE 2 4. EMITTER 2 3. BASE 2 3. ANDE/ANDE 2 5. BASE 2 5. BASE 1 5. CATHODE 2 5. BASE 2 5. BASE 1 5. CATHODE 2 6. COLLECTOR 2 3. BASE 1 5. CATHODE 2 7. COLLECTOR 2 3. BASE 1 5. CATHODE 2 8. STYLE 5: STYLE 5: STYLE 6: PIN 1. CATHODE 2 2. CATHODE 2 2. CATHODE 2 3. COLLECTOR 2 3. ANDDE 3. CATHODE 2 3. CATHODE 2 4. EMITTER 4 STYLE 5: STYLE 6: PIN 1. CATHODE 3. CATHODE 4. CATHODE 2 3. CATHODE 3. CATHODE 5. CATHODE 4. CATHODE 4. CATHODE 5. CATHODE 5. CATHODE 5. CATHODE 5. CATHODE 5. CATHODE 5. GATE 2 3. DRAIN 2 3. CATHODE 3. CATHODE 3. CATHODE 5. DRAIN 5. GATE 2 3. DRAIN 2 GATE 1 3. ANDDE 4. SDURCE 4. SDURCE 1 3. DRAIN 2 CATHODE 5. DRAIN 5. GATE 2 5. ANDDE 5. DRAIN 5. GATE 2 3. CATHODE 5. DRAIN 5. GATE 2 CATHODE 5. DRAIN 5. GATE 2 6. ANDDE 1 PIN 1. EMITTER 1 DRAIN 1. SDURCE 1 7. NC 2 S DRASE 1					L	0.10	0.20	0.30
STYLE i STYLE 2: STYLE 3: PIN 1. EMITTER 1 PIN 1. EMITTER 2 STYLE 3: 3. COLLECTOR 2 3. BASE 2 3. ANDE/ANDE 2 4. EMITTER 2 3. BASE 2 3. ANDE/ANDE 2 5. BASE 2 5. BASE 1 5. CATHODE 2 5. BASE 2 5. BASE 1 5. CATHODE 2 6. COLLECTOR 2 3. BASE 1 5. CATHODE 2 7. COLLECTOR 2 3. BASE 1 5. CATHODE 2 8. STYLE 5: STYLE 5: STYLE 6: PIN 1. CATHODE 2 2. CATHODE 2 2. CATHODE 2 3. COLLECTOR 2 3. ANDDE 3. CATHODE 2 3. CATHODE 2 4. EMITTER 4 STYLE 5: STYLE 6: PIN 1. CATHODE 3. CATHODE 4. CATHODE 2 3. CATHODE 3. CATHODE 5. CATHODE 4. CATHODE 4. CATHODE 5. CATHODE 5. CATHODE 5. CATHODE 5. CATHODE 5. CATHODE 5. GATE 2 3. DRAIN 2 3. CATHODE 3. CATHODE 3. CATHODE 5. DRAIN 5. GATE 2 3. DRAIN 2 GATE 1 3. ANDDE 4. SDURCE 4. SDURCE 1 3. DRAIN 2 CATHODE 5. DRAIN 5. GATE 2 5. ANDDE 5. DRAIN 5. GATE 2 3. CATHODE 5. DRAIN 5. GATE 2 CATHODE 5. DRAIN 5. GATE 2 6. ANDDE 1 PIN 1. EMITTER 1 DRAIN 1. SDURCE 1 7. NC 2 S DRASE 1						- 170	- 1	
STYLE 1: STYLE 2: STYLE 3: PIN 1: ENITTER 1 2: EMITTER 1 2: EMITTER 1 2: BASE 1 3: BASE 2 3: ANDE/ANDDE 2 4: EMITTER 2 4: COLLECTOR 2 4: CATHODE 1 3: COLLECTOR 1 6: COLLECTOR 1 6: ANDE/ANDDE 2 6: COLLECTOR 1 6: COLLECTOR 1 6: ANDDE/ANDDE 1 8: SASE 2: 5: SASE 1: 5: CATHODE 2 6: COLLECTOR 1 6: COLLECTOR 1 6: ANDDE/ANDDE 1 8: CATHODE 2: CATHODE 2: 2: COLLECTOR 2: CATHODE 2: 3: CATHODE 2: CATHODE 2: 4: EMITTER 4: STYLE 5: PIN 1: CATHODE 2: CATHODE 2: 4: EMITTER 4: CATHODE 2: 5: COLLECTOR 2: CATHODE 3: 6: COLLECTOR 6: CATHODE 4: 7: TYLE 7: STYLE 8: 9: TYLE 7: STYLE 8: 9: TYLE 7: STYLE 8: 9: CALLECTOR 6: CATHODE 2: 3: ANDE 6: SURAIN 2: 4: CATHODE 1: SURAIN 2: 5: ANDE 2: SURAIN 2: 6: CATHODE 1: SURAIN 2: 6: CATHODE 2					0.30			< 0.45
STYLE 1: STYLE 2: STYLE 3: PIN 1: ENITTER 1 2: EMITTER 1 2: EMITTER 1 2: BASE 1 3: BASE 2 3: ANDE/ANDDE 2 4: EMITTER 2 4: COLLECTOR 2 4: CATHODE 1 3: COLLECTOR 1 6: COLLECTOR 1 6: ANDE/ANDDE 2 6: COLLECTOR 1 6: COLLECTOR 1 6: ANDDE/ANDDE 1 8: SASE 2: 5: SASE 1: 5: CATHODE 2 6: COLLECTOR 1 6: COLLECTOR 1 6: ANDDE/ANDDE 1 8: CATHODE 2: CATHODE 2: 2: COLLECTOR 2: CATHODE 2: 3: CATHODE 2: CATHODE 2: 4: EMITTER 4: STYLE 5: PIN 1: CATHODE 2: CATHODE 2: 4: EMITTER 4: CATHODE 2: 5: COLLECTOR 2: CATHODE 3: 6: COLLECTOR 6: CATHODE 4: 7: TYLE 7: STYLE 8: 9: TYLE 7: STYLE 8: 9: TYLE 7: STYLE 8: 9: CALLECTOR 6: CATHODE 2: 3: ANDE 6: SURAIN 2: 4: CATHODE 1: SURAIN 2: 5: ANDE 2: SURAIN 2: 6: CATHODE 1: SURAIN 2: 6: CATHODE 2					T T	ti dh i	┼┤──┸	
STYLE 1: STYLE 2: STYLE 3: PIN 1: ENITTER 1 2: EMITTER 1 2: EMITTER 1 2: BASE 1 3: BASE 2 3: ANDE/ANDDE 2 4: EMITTER 2 4: COLLECTOR 2 4: CATHODE 1 3: COLLECTOR 1 6: COLLECTOR 1 6: ANDE/ANDDE 2 6: COLLECTOR 1 6: COLLECTOR 1 6: ANDDE/ANDDE 1 8: SASE 2: 5: SASE 1: 5: CATHODE 2 6: COLLECTOR 1 6: COLLECTOR 1 6: ANDDE/ANDDE 1 8: CATHODE 2: CATHODE 2: 2: COLLECTOR 2: CATHODE 2: 3: CATHODE 2: CATHODE 2: 4: EMITTER 4: STYLE 5: PIN 1: CATHODE 2: CATHODE 2: 4: EMITTER 4: CATHODE 2: 5: COLLECTOR 2: CATHODE 3: 6: COLLECTOR 6: CATHODE 4: 7: TYLE 7: STYLE 8: 9: TYLE 7: STYLE 8: 9: TYLE 7: STYLE 8: 9: CALLECTOR 6: CATHODE 2: 3: ANDE 6: SURAIN 2: 4: CATHODE 1: SURAIN 2: 5: ANDE 2: SURAIN 2: 6: CATHODE 1: SURAIN 2: 6: CATHODE 2						τμτ		
PIN I. EMITTER 1 2. BASE 1 2. CATHODE 1 2. CATHODE 1 2. CATHODE 2 3. COLLECTOR 2 4. CATHOLECTOR 2 5. BASE 2 5. BASE 2 5. BASE 1 6. COLLECTOR 1 6. COLLECTOR 1 6. COLLECTOR 1 7. CALLECTOR 2 5. BASE 2 5. BASE 2 5. BASE 1 6. COLLECTOR 1 6. COLLECTOR 1 7. CALLECTOR 2 7. CALLECTOR 3 7. CALLECTOR 3 7. CALLECTOR 3 7. CALLECTOR 4 7. CALLECTOR 4 7. CALLECTOR 5 7. CALLECTOR 7 7. CALLECTOR 5 7. CALLECTOR 7 7.					1.80		I	
3. CULLECTOR 2 3. BASE 2 3. ANDDE/ANDDE 2 4. EMITTER 2 4. CATHODE 2 4. CATHODE 2 5. BASE 2 5. BASE 1 5. CATHODE 2 6. COLLECTOR 1 6. COLLECTOR 1 6. ANDDE/ANDDE 1 RECOMMENDED MOUNTING FOOTPRINT* STYLE 4: PIN 1. CATHODE 2. CATHODE 2. COLLECTOR 2 3. ANDDE 3. BASE 2 3. ANDDE 3. BASE 2 5. CATHODE 2. COLLECTOR 2 2. CATHODE 3. BASE 3 ANDDE 3. BASE 4 4. ANDDE 4. EMITTER 4 STYLE 6: 9. COLLECTOR 5. CATHODE 3. CATHODE 2 3. BASE 4 4. ANDDE 4 4. CATHODE 5. CATHODE 5. CATHODE 5. CATHODE 6. CATHODE 6. CATHODE 6. CATHODE 7. COLDERING TECHNIQUES REFERENCE MANUAL, SOLDERING TOR SOLDERING TOR SOLDERING AND MOUNTING TECHNICE REVIEW MANUAL, SOLDERING MANUAL, SOLDERING POLYDALL, SOLDERING MANUAL, SOLDERING MANUAL, SOLDERING MANUAL, SOLDERING MANUAL, SOLDERING DIAGRAM* YILE 7: STYLE 8: STYLE 9: 9. NAIDE 2 3. GATE 2 SOLRCE 2 3. CATHODE 3. CATHODE 4. SDURCE 4. SDURCE 2 SOLRAIN 1 3. CATHODE 5. DRAIN 5. GATE 2 SORAIN 1 4. CATHODE				E 1			+-	
5. BASE 2 5. BASE 1 5. CATHIDE 2 0.30 6. COLLECTOR 1 6. COLLECTOR 1 6. ANDE/ANDDE 1 RECOMMENDED MOUNTING FOOTPRINT* STYLE 4: STYLE 5: STYLE 6: PIN 1. CATHIDDE PIN 1. CATHIDDE 2. COLLECTOR 2. CATHIDDE 2. CATHIDDE 3. BASE 3. ANDDE 3. BASE 3. ANDDE 3. CATHIDDE 3. CATHIDDE 5. CATHIDDE 4. EMITTER 4. ANDDE 4. CATHIDDE 5. CATHIDDE 5. CATHIDDE 5. COLLECTOR 5. CATHIDDE 5. CATHIDDE 5. CATHIDDE 5. CATHIDDE 5. COLLECTOR 6. CATHIDDE 5. CATHIDDE 5. CATHIDDE 5. CATHIDDE 5. COLLECTOR 6. CATHIDDE 6. CATHIDDE 6. CATHIDDE 6. CATHIDDE 2. ANDDE 2. DRAIN 2. GATE 1 2. MANDA MARKING DIAGRAM* STYLE 7: STYLE 8: STYLE 9: MARKING DIAGRAM* MARKING DIAGRAM* 2. ANDDE 2. DRAIN 3. DRAIN 1 2. GATE 2 MARKING DIAGRAM* 3. CATHIDDE 3. DRAIN 5. DIRCE 1 XX = Specific Device Code M = Month Code 4. CATHIDDE 1 FIN 1. EMITTER 2						╧╋╴		
STYLE 4: STYLE 5: STYLE 6: * FOR ADDITIONAL INFORMATION ON OUR Pb-FREE PIN 1. CATHIDDE PIN 1. CATHIDDE 2. CATHIDDE 2. CATHIDDE 3. CATHIDDE 3. BASE 3. ANDDE 3. CATHIDDE 3. CATHIDDE 4. CATHIDDE 4. CATHIDDE 5. COLLECTOR 5. CATHIDDE 4. CATHIDDE 4. CATHIDDE 5. CATHIDDE 5. CATHIDDE 6. COLLECTOR 6. CATHIDDE 5. CATHIDDE 6. CATHIDDE 6. CATHIDDE 6. CATHIDDE 7. CATHIDDE 8. CATHIDDE 6. CATHIDDE 6. CATHIDDE 6. CATHIDDE 6. CATHIDDE 8. ANDDE 9. CATHIDDE 6. CATHIDDE 6. CATHIDDE 6. CATHIDDE 6. CATHIDDE 8. ANDDE 2. DRAIN 2. GATE 1 3. DRAIN 2 6. CATHIDDE 6. CATHIDDE 2. ANDDE 3. DRAIN 5. GATE 2 3. CATHIDE XX = Specific Device Code M M = Month Code • = D-Free Package STYLE 10: STYLE 11: FTHIS INFORMATION IS generic. Please refer to 9. N/C 2. BASE 2 3. CATHIDDE 9. COLLECTUR 1 4. ANDDE 1 9. ASEE 1 0. CATHIDE PD-Free indicat						′ / 		
STYLE 4: STYLE 5: STYLE 6: * FOR ADDITIONAL INFORMATION ON OUR Pb-FREE PIN 1. CATHIDDE 2. CATHIDDE 2. ANIDDE 3. BASE 3. ANDDE 3. CATHIDDE 3. BASE 3. ANDDE 3. CATHIDDE 3. CATHIDDE 3. CATHIDDE 3. CATHIDDE 4. EMITTER 4. ANDDE 4. CATHIDDE 5. CATHIDDE 5. CATHIDDE 5. CATHIDDE 5. COLLECTOR 6. CATHIDDE 5. CATHIDDE 5. CATHIDDE 6. CATHIDDE 6. CATHIDDE 6. COLLECTOR 6. CATHIDDE 5. CATHIDDE 6. CATHIDDE 6. CATHIDDE 6. CATHIDDE 3. CATHIDDE 3. CATHIDDE 3. CATHIDDE 6. CATHIDDE 6. CATHIDDE 6. CATHIDDE 3. CATHIDDE 3. GATE 3. DRAIN 2. GATE 1 3. DRAIN 2 4. CATHIDDE 4. SDURCE 2. ANDICE 3. CATHIDDE 4. CATHIDDE 5. GATE 2 3. DRAIN 1 XX = Specific Device Code M = Month Code - = Pb-Free Package STYLE 10' STYLE 11' FIN 1. CATHIDE 2. BASE 2 3. CATHIDDE *This information is generic. Plase refer to device data sheet for actual part marking. 2. N/C 3. CATHIDDE 2 3. CATH	6. COLLECTOR 1	6. COLLECTOR 1	6. ANDDE/	ANDDE 1				
PIN 1. COLLECTOR PIN 1. CATHODE PIN 1. CATHODE 2. ANDDE 3. ANDDE 3. CATHODE 3. ANDDE 3. CATHODE 4. CATHODE 4. CATHODE 4. CATHODE 4. CATHODE 4. CATHODE 4. CATHODE 6. CATHODE 6. CATHODE 6. CATHODE 6. CATHODE 4. CATHODE 6. CA					RECOMMENDE	ED MOUN	TING FOO	TPRINT*
2. CULLECTUR 2. CAIHUDE 2. ANUDE 3. CATHODE 4. CATHODE 5. CATHODE 5. CATHODE 5. CATHODE 5. CATHODE 6. CATHODE 6. CATHODE 6. CATHODE 6. CATHODE 6. CATHODE 7. CATHODE	PIN 1. COLLECTOR	PIN 1. CATHODE	PIN 1. CATHODE	* F(
4. EMITTER 4. ANDDE 4. CATHEDE MANUAL, SOLDERRM/D. 5. COLLECTOR 6. CATHEDE 5. CATHEDE GENERIC 6. COLLECTOR 6. CATHEDE 6. CATHEDE MARKING DIAGRAM* STYLE 7: STYLE 8: STYLE 9: MARKING DIAGRAM* PIN 1. CATHEDE 2. DRAIN 2. GATE 3. DRAIN 2 3. CATHEDE 3. GATE 3. DRAIN 2 1 4. CATHEDE 4. SDURCE 4. SDURCE 2 1 5. ANDDE 5. DRAIN 5. GATE 2 XX = Specific Device Code M = Month Code • = Pb-Free Package STYLE 10: STYLE 11: XX = Specific Device Code PIN 1. CATHEDE 1. DEMITTER 2 *This information is generic. Please refer to 2. N/C 2. BASE 2 device data sheet for actual part marking. 3. CATHEDE 1 PIN 1. EMITTER 1 or may not be present. Some products may 3. CATHEDE 2 4. EMITTER 1 or may not be present. Some products may 3. N/C 5. BASE 1 or may not be present. Some products may 5. N/C 5. BASE 1 or may not be present. Some products may 5. N/C 5. BASE 1	3. BASE	3. ANDDE	3. CATHOD	Ł	OWNLOAD THE	ON SEMIC	ONDUCTOR	SOLDERING
GENERIC MARKING DIAGRAM* STYLE 7: STYLE 8: STYLE 9: PIN 1. CATHODE PIN 1. DRAIN PIN 1. SDURCE 1 2. ANDDE 2. DRAIN 2. GATE 1 3. CATHODE 3. GATE 3. DRAIN 2 4. CATHODE 4. SDURCE 4. SDURCE 4. SDURCE 2 5. ANDDE 5. DRAIN 5. GATE 2 6. CATHODE 6. DRAIN 6. DRAIN 1 7 File * Style 10: 8. STYLE 10: STYLE 11: * = Pb-Free Package STYLE 10: STYLE 11: PIN 1. CATHODE 1 PIN 1. EMITTER 2 2. N/C 2. BASE 2 3. CATHODE 2 3. COLLECTOR 1 9. N/C 3. CALLECTOR 1 4. ANDDE 2 4. EMITTER 1 5. N/C SASE 1 6. ANDDE 1 6. COLLECTOR 2 9. N/C SASE 1 6. ANDDE 1 6. COLLECTOR 2 9. N/C SASE 1 6. ANDDE 1 6. COLLECTOR 2 9. N/C SASE 1 6. ANDDE 1 6. COLLECTOR 2 9. N/C SASE 1 6. ANDDE 1	5. COLLECTOR	5. CATHODE	5. CATHOD	E				
STYLE 7: STYLE 8: STYLE 9: MARKING DIAGRAM* PIN 1. DRAIN PIN 1. SDURCE 1 GATE 1 GATE 1 2. ANDDE 2. DRAIN 2. GATE 1 GATE 2 3. CATHDDE 3. GATE 3. DRAIN 2 GATE 2 4. CATHDDE 4. SDURCE 4. SDURCE 2 1 GATE 2 5. ANDDE 5. GATE 2 GATE 2 1 6. CATHDDE 6. DRAIN 6. DRAIN 1 XX = Specific Device Code M = Month Code - - = Pb-Free Package STYLE 10: STYLE 11: *This information is generic. Please refer to 2. N/C 2. BASE 2 device data sheet for actual part marking. 3. CATHDDE 2 3. COLLECTOR 1 Pb-Free indicator, "G" or microdot "•", may 4. ANDDE 2 3. COLLECTOR 1 Pb-Free indicator, "G" or microdot "•", may 5. N/C 5. BASE 1 or may not be present. Some products may 6. ANDDE 1 6. COLLECTOR 2 Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED" in red. Electronic versions are uncontrolled except when stamped "CONTROLLED"	6. COLLECTOR	6. CATHODE	6. CATHOD	E		GENER	C	
PIN 1. CATHIDE PIN 1. DRAIN PIN 1. SDURCE 1 2. ANDDE 2. DRAIN 2. GATE 1 3. CATHIDDE 3. GATE 3. DRAIN 2 4. CATHIDDE 4. SDURCE 4. SDURCE 2 5. ANDDE 5. DRAIN 5. GATE 2 6. CATHIDDE 6. DRAIN 6. DRAIN 7 6. DRAIN 6. DRAIN 8. CATHIDDE 6. DRAIN 6. DRAIN 9. OLATHIDE 6. DRAIN 6. DRAIN 9. CATHIDDE 6. DRAIN 6. DRAIN 9. CATHIDDE 1. EMITTER 2 XX = Specific Device Code M = Month Code = 9. N/C 2. BASE 2 device data sheet for actual part marking. 3. CATHIDDE 2 3. COLLECTOR 1 Pb-Free indicator, "G" or microdot "•", may 4. ANDDE 2 4. EMITTER 1 or may not be present. Some products may 5. N/C 5. BASE 1 or may not be present. Some products may 6. ANDDE 1 6. COLLECTOR 2 Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red. <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>								
3. CATHIDE 4. CATHIDE 5. ANDDE 5. ANDDE 6. DRAIN 5. GATE 2 5. ANDDE 6. DRAIN 6. DRAIN 5. GATE 2 5. ANDDE 6. DRAIN 6. DRAIN 7. STYLE 10: 7. N/C 7. SASE 2 7. CATHIDE 7. N/C 7. SASE 2 7. CATHIDE 7. N/C 7. SASE 2 7. CATHIDE 7. N/C 7. SASE 2 7. CATHIDE 7. N/C 7. SASE 1 7. COLLECTOR 7.	PIN 1. CATHODE	PIN 1. DRAIN	PIN 1. SOURCE	1			1	
5. ANDDE 5. DRAIN 5. GATE 2 6. CATHEDDE 6. DRAIN 6. DRAIN 1 XX = Specific Device Code M = Month Code • = Pb-Free Package STYLE 10: STYLE 11: PIN 1. CATHEDDE 1 PIN 1. EMITTER 2 2. N/C 2. BASE 2 3. CATHEDDE 2 3. COLLECTER 1 4. ANEDDE 2 4. EMITTER 1 5. N/C 5. BASE 1 6. ANEDE 1 6. COLLECTER 2 Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.	3. CATHODE	3. GATE	3. DRAIN â			XXM•		
STYLE 10: STYLE 11: PD-Free Package *This information is generic. Please refer to ACTHDDE 1 PIN 1. EMITTER 2 CATHDDE 2 CDLLECTOR 1 PD-Free indicator, "G" or microdot "=", may or may not be present. Some products may N/C SBASE 1 COLLECTOR 2 DOCUMENT NUMBER: 98AON11126D Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.]	
STYLE 10: STYLE 11: - = Pb-Free Package PIN 1. CATHIDE 1 PIN 1. EMITTER 2 *This information is generic. Please refer to 2. N/C 2. BASE 2 device data sheet for actual part marking. 3. CATHIDE 2 3. COLLECTOR 1 Pb-Free indicator, "G" or microdot "=", may 4. ANDDE 2 4. EMITTER 1 or may not be present. Some products may 5. N/C 5. BASE 1 ort follow the Generic Marking. 6. ANDDE 1 6. COLLECTOR 2 Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.	6. CATHODE	6. DRAIN	6. DRAIN 1	L		•		
PIN 1. CATHIDE 1 PIN 1. EMITTER 2 *This information is generic. Please refer to device data sheet for actual part marking. 2. N/C 2. BASE 2 device data sheet for actual part marking. 3. CATHIDE 2 3. CDLLECTOR 1 Pb-Free indicator, "G" or microdot "•", may 4. ANDDE 2 4. EMITTER 1 or may not be present. Some products may 5. N/C 5. BASE 1 not follow the Generic Marking. 6. ANDDE 1 6. CDLLECTOR 2 Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red. Image: Control of the co								
3. CATHEDE 2 3. CELLECTER 1 Pb-Free indicator, "G" or microdot "•", may 4. ANDDE 2 4. EMITTER 1 or may not be present. Some products may 5. N/C 5. BASE 1 not follow the Generic Marking. 6. ANDDE 1 6. CELLECTER 2 not follow the Generic Marking. DOCUMENT NUMBER: 98AON11126D Electronic versions are uncontrolled except when accessed directly from the Document Repository.	PIN 1. CATHODE 1	PIN 1. EMITTER 2				, e		
4. ANDDE 2 4. EMITTER 1 or may not be present. Some products may not follow the Generic Marking. 5. N/C 5. BASE 1 not follow the Generic Marking. 6. ANDDE 1 6. CDLLECTOR 2 Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.	3. CATHODE 2	3. COLLECTOR 1						
6. ANDDE 1 6. CDLLECTOR 2 not follow the Generic Marking. DOCUMENT NUMBER: 98AON11126D Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.					or may not be p	resent. So	me product	
Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.	6. ANDDE 1	6. COLLECTOR 2						he Document Repository.
DESCRIPTION: SOT-563-6 1.60x1.20x0.55, 0.50P PAGE 1 OF 1				Printed versions are un				COPY" in red.
	DESCRIPTI	ON: SOT-563-6 1	.60x1.20x0.55	, 0.50P				PAGE 1 OF 1

SOT-563-6 1.60x1.20x0.55, 0.50P CASE 463A

onsemi and ONSEMI: are trademarks of Semiconductor Components Industries, LLC dba onsemi or its subsidiaries in the United States and/or other countries. onsemi reserves the right to make changes without further notice to any products herein. onsemi makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does onsemi 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. onsemi does not convey any license under its patent rights nor the rights of others.



SOT-963 1.00x1.00x0.37, 0.35P CASE 527AD ISSUE F DATE 20 FEB 2024 NDTES: MILLIMETERS DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 2018. 1. CONTROLLING DIMENSION: MILLIMETERS. 2. DIM MIN. NDM. MAX. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH З. 0.37 0.40 Α 0.34 THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL. 0.10 0.15 0.20 h DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, 4. PROTRUSIONS, OR GATE BURRS. С 0.07 0.12 0.17 A D D 0.95 1.00 1.05 А В Ε 0.75 0.80 0.85 4 6 0.35 BSC e Н Н 0.95 1.00 1.05 0.19 REF L2 0.05 0.10 0.15 ΤΠΡ VIEW С 6X 0.20 -6X 0.35 SIDE VIEW e 6X L 1.20 PACKAGE DUTLINE 0.35 PITCH L2 6X b RECOMMENDED MOUNTING \oplus 0.08 A B FOOTPRINT BOTTOM VIEW *For additional information on our Pb-Free strategy and soldering details, please download the DN Semiconductor STYLE 1: PIN 1. EMITTER 1 STYLE 3: STYLE 2: PIN 1. EMITTER 1 PIN 1. CATHODE 1 Soldering and Mounting Techniques Reference manual, SOLDERRM/D. 2. BASE 1 2. EMITTER2 2. CATHODE 1 3. COLLECTOR 2 4. EMITTER 2 3. ANODE/ANODE 2 4. CATHODE 2 3. BASE 2 4. COLLECTOR 2 5. BASE 2 5. BASE 1 5. CATHODE 2 6. COLLECTOR 1 6. COLLECTOR 1 6. ANODE/ANODE 1 STYLE 4: STYLE 5: STYLE 6: PIN 1. CATHODE 2. CATHODE 3. ANODE 4. ANODE PIN 1. CATHODE 2. ANODE 3. CATHODE 4. CATHODE PIN 1. COLLECTOR 2. COLLECTOR GENERIC 3. BASE 4. EMITTER **MARKING DIAGRAM*** 5 COLLECTOR 5. CATHODE 6. CATHODE 5 CATHODE 6. COLLECTOR 6. CATHODE STYLE 9: PIN 1. SOURCE 1 2. GATE 1 STYLE 7: PIN 1. CATHODE 2. ANODE STYLE 8: XXM PIN 1. DRAIN 2. DRAIN 1 3. CATHODE 4. CATHODE 3. GATE 4. SOURCE 3. DRAIN 2 4. SOURCE 2 XX = Specific Device Code 5. ANODE 6. CATHODE 5. DRAIN 5. GATE 2 6. DRAIN = Month Code 6. DRAIN 1 М STYLE 10: PIN 1. CATHODE 1 *This information is generic. Please refer to device data sheet for actual part marking. 2. N/C 3. CATHODE 2 Pb-Free indicator, "G" or microdot "=", may 4. ANODE 2 5. N/C or may not be present. Some products may not follow the Generic Marking. ANODE 1 Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red. **DOCUMENT NUMBER:** 98AON26456D **DESCRIPTION:** SOT-963 1.00x1.00x0.37, 0.35P PAGE 1 OF 1

onsemi and ONSEMi are trademarks of Semiconductor Components Industries, LLC dba onsemi or its subsidiaries in the United States and/or other countries. onsemi reserves the right to make changes without further notice to any products herein. onsemi makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does onsemi 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. onsemi does not convey any license under its patent rights of others.

onsemi, ONSEMI, and other names, marks, and brands are registered and/or common law trademarks of Semiconductor Components Industries, LLC dba "onsemi" or its affiliates and/or subsidiaries in the United States and/or other countries. onsemi owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of onsemi's product/patent coverage may be accessed at <u>www.onsemi.com/site/pdf/Patent_Marking.pdf</u>. onsemi reserves the right to make changes at any time to any products or information herein, without notice. The information herein is provided "as-is" and onsemi makes no warranty, representation or guarantee regarding the accuracy of the information, product features, availability, functionality, or suitability of its products for any particular purpose, nor does onsemi 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 indental damages. Buyer is responsible for its products and applications using onsemi products, including compliance with all laws, regulations and safety requirements or standards, regardless of any support or applications information provided by onsemi. "Typical" parameters which may be provided in onsemi 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. onsemi does not convey any license under any of its intellectual property rights nor the rights of others. onsemi products are not designed, intended, or authorized for use as a critical component in life support systems or any FDA Class 3 medical devices or medical devices with a same or similar classification. Buyer shall indemnify and hold onsemi and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs,

ADDITIONAL INFORMATION

TECHNICAL PUBLICATIONS:

Technical Library: www.onsemi.com/design/resources/technical-documentation onsemi Website: www.onsemi.com

ONLINE SUPPORT: <u>www.onsemi.com/support</u> For additional information, please contact your local Sales Representative at <u>www.onsemi.com/support/sales</u>