

Generic Copy

Issue Date: 09-Mar-2012

<u>TITLE</u>: Package change from TO-218 to TO-247 for all Bipolar Power Transistors

PROPOSED FIRST SHIP DATE: 09-Jun-2012

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or Farrah Awang Omar<Farrah.Omar@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Laura Riverslaura.rivers@onsemi.com

NOTIFICATION TYPE:

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 90 days prior to implementation of the change.

ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact <quality@onsemi.com>.

DESCRIPTION AND PURPOSE:

This FPCN announces the package change of all TO-218 Bipolar Power Transistors currently built at PSI Manila facility, to package TO-247 manufactured at Nantong-Fujitsu in China facility. The TO-247 package will improve device performance and is mechanically compatible with TO-218. On next pages we show Case Outline drawings of both TO-218 and TO-247 packages. The devices in TO-247 package will guarantee the same electrical parametric distribution.

Nantong Fujitsu facility is currently used to manufacture ON's TO-220AB, TO220AC, I2PAK & DPAK devices and is ISO/TS 16949:2002 certified.

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RELIABILITY DATA SUMMARY:

Package: TO-247

Qual Vehicles: MJW21195G, MJW21196G, TIP35CG, TIP36CG, BU323ZG

MJW21195G			
Test:	Conditions:	Interval:	Results
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/77
H3TRB+PC	Ta=85C RH=85%	1008 hrs	0/77
	bias=80% rated V or100V Max		
IOL+PC	Ta=25C, Delta TJ = 100 C,	8572 cyc	0/77
	Ton/off = 3.5 min.		
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/77
RSH	Ta=260C, 10 sec dwell		0/30
MJW21196G			
Test:	Conditions:	Interval:	Results
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/77
H3TRB+PC	Ta=85C RH=85%	1008 hrs	0/77
	bias=80% rated V or100V Max		
IOL+PC	Ta=25C, Delta TJ = 100 C,	8572 cyc	0/77
	Ton/off = 3.5 min.		
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/77
RSH	Ta=260C, 10 sec dwell		0/30
TIP35CG			
Test:	Conditions:	Interval:	Results
	Ta=121C RH=100% ~15 psig	96 hrs	0/77
H3TRB+PC	Ta=85C RH=85%	1008 hrs	0/77
	bias=80% rated V or100V Max		
TIDOOOO			
TIP36CG	O and difference	latamal.	D 11 -
Test:	Conditions:	Interval:	Results
	Ta=121C RH=100% ~15 psig	96 hrs	0/77
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/77
BU323ZG			
Test:	Conditions:	Interval:	Results
		96 hrs	0/77
H3TRB+PC	Ta=121C RH=100% ~15 psig Ta=85C RH=85%	1008 hrs	0/77
H31KD+FC	bias=80% rated V or100V Max	10001115	0///
	DIAS=00 /0 TAICU V UI TUUV IVIAX		

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ELECTRICAL CHARACTERISTIC SUMMARY:

There are no changes in electrical characteristics; and product performance meets data sheet specifications. Characterization data is available upon request.

CHANGED PART IDENTIFICATION:

Product from Nantong-Fujitsu will be identified by NF site code marking.

List of affected General Parts:

BDV64BG

BDV65BG

BU323ZG

MJE4343G

MJH11017G

MJH11019G

MJH11020G

MJH11021G

MJH11022G

MJH6284G

MJH6287G

TIP140G

TIP141G

TIP142G

TIP147G

TIP2955G

TIP3055G

TIP33CG

TIP35AG

TIP35CG

TIP36AG

TIP36CG

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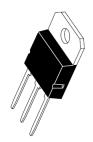
Case Outline Drawings:

MECHANICAL CASE OUTLINE

PACKAGE DIMENSIONS

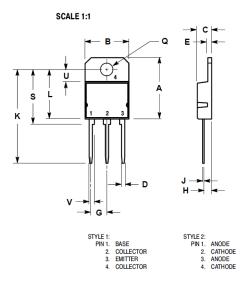
ON Semiconductor





SOT-93 (TO-218) CASE 340D-02 ISSUE E

DATE 01/03/2002



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI

Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.

	MILLIMETERS		INCHES	
DIM	MIN	MAX	MIN	MAX
Α		20.35		0.801
В	14.70	15.20	0.579	0.598
С	4.70	4.90	0.185	0.193
D	1.10	1.30	0.043	0.051
E	1.17	1.37	0.046	0.054
G	5.40	5.55	0.213	0.219
Н	2.00	3.00	0.079	0.118
J	0.50	0.78	0.020	0.031
K	31.00 REF		1.220 REF	
L		16.20		0.638
Q	4.00	4.10	0.158	0.161
S	17.80	18.20	0.701	0.717
U	4.00 REF		0.157 REF	
v	1 75 DCC		0.060	

MARKING DIAGRAM



A = Assembly Location Y = Year WW = Work Week xxxxx = Device Code



CRITICAL DIMENSIONS, TO-218 vs TO-247:

Dimension "G" = 5.40 to 5.45 mm (TO-218), 5.45 mm BSC (TO-247)

Dimension "Q" = 4.0 to 4.10 mm (TO-218), 3.55 to 3.65 mm (TO-247)

Dimension "S" = 17.80 to 18.20 mm (TO-218), 19.46 mm (TO-247)

Dimension "B" = 14.7 to 15.2 mm (TO-218), 15.75 to 16.26 mm (TO-247)

Dimension "A" = 20.35 mm max (TO-218), 20.32 to 21.08 mm (TO-247)



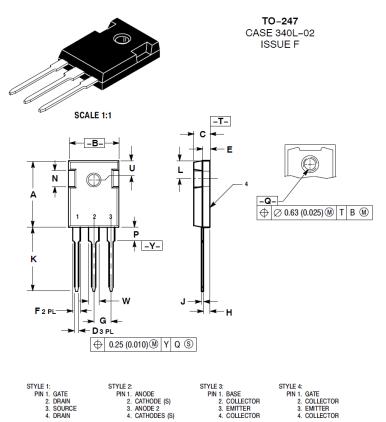
Case Outline Drawings:

MECHANICAL CASE OUTLINE PACKAGE DIMENSIONS

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DATE 26 OCT 2011







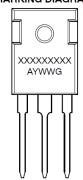
- NOTES:

 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.

 2. CONTROLLING DIMENSION: MILLIMETER.

	MILLIMETERS INCHES				
DIM	MIN	MAX	MIN	MAX	
Α	20.32	21.08	0.800	8.30	
В	15.75	16.26	0.620	0.640	
С	4.70	5.30	0.185	0.209	
D	1.00	1.40	0.040	0.055	
Е	1.90	2.60	0.075	0.102	
F	1.65	2.13	0.065	0.084	
G	5.45 BSC		0.215 BSC		
Н	1.50	2.49	0.059	0.098	
J	0.40	0.80	0.016	0.031	
K	19.81	20.83	0.780	0.820	
L	5.40	6.20	0.212	0.244	
N	4.32	5.49	0.170	0.216	
Р		4.50		0.177	
Q	3.55	3.65	0.140	0.144	
U	6.15 BSC		0.242 BSC		
W	2.87	3.12	0.113	0.123	

GENERIC MARKING DIAGRAM*



XXXXX = Specific Device Code = Assembly Location

A Y = Year ww = Work Week = Pb-Free Package G

TO-247 Case Outline

STYLE 5: PIN 1. CATHODE 2. ANODE 3. GATE 4. ANODE

STYLE 6: PIN 1. MAIN TERMINAL 1 2. MAIN TERMINAL 2 3. GATE 4. MAIN TERMINAL 2

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