Micro Commercial Components
130 W Cochran St, Unit B
Simi Valley, CA 93065
Tel:818-701-4933

Process Change Notification (PCN)

Notification number:	**050724-1**
Notification date:	**07 May 2024**
Proposed implementation date:	**06 Aug 2024** (90 days notification before change, according to JEDEC standard)
Product type affected:	Please refer to table 1 in Appendix 1.
Change Category	Package design structure (Lead frame).
Change Classification	Major
Change description:	To re-design product lead frame to optimize bond wire area as well as improve product heat dissipation. Remarks: Full electrical characterization and high reliability testing has been completed on representative part numbers.
Reason for change:	To enhance product quality and performances.
Deposition of old product	Existing inventory will ship until depleted.
Identification of Changed product:	To be identified by LOT no./ Date code (DC).
Contact person:	Please contact your respective Account manager (AM) / Inside sales representative (ISR/CSR) if you have further query.
Approved by:	Jason Gao (Director of Engineering) Steve Zhang (Director of Supply Chain） Seaman Wu (Director of Quality) Pamela Cheng (General Manager)

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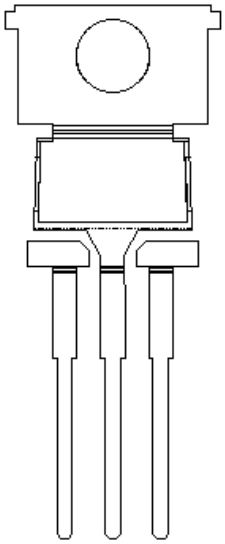
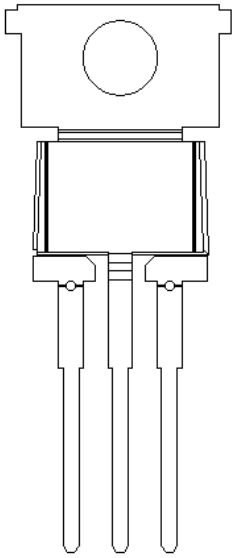
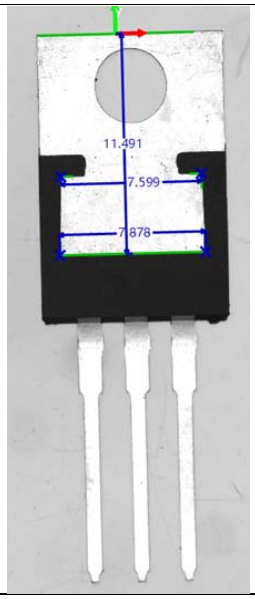
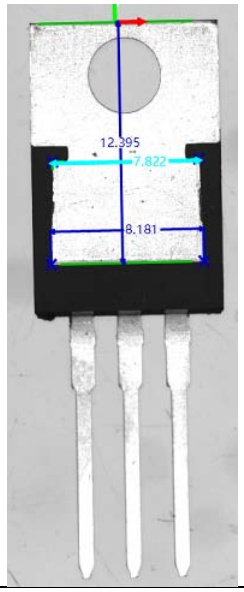
Appendix 1: Table 1

Product type affected					
MBRL30U100CT-BP	MBRL40100CT-BP	MBRL40U100CT-BP	MBRBL40100CT-BP	MBRL40120CT-BP	MBR40100CT-BP
MBR40150CT-BP	MBRBL30U100CT-TP	MBRBL40100CT-TP	MBRB40100CTH-TP	MBRB40200CTH-TP	

Change description

Change description	Before the change	After the change
Lead Frame change (TO-220AB)		
Appearance change (TO-220AB)		

Note: Other package outline dimensions have not changed.

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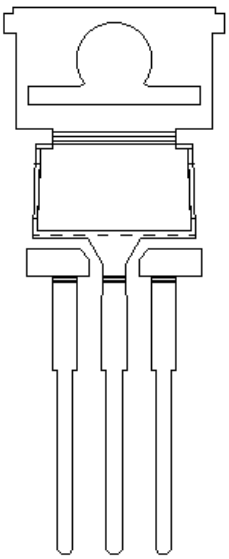
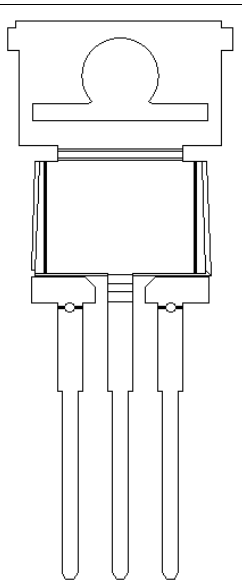
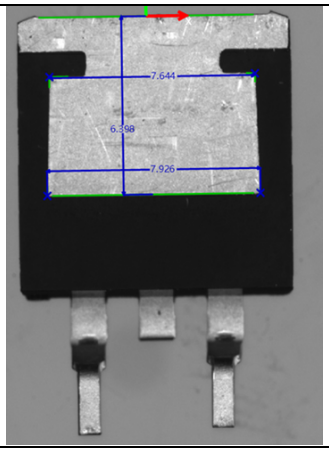
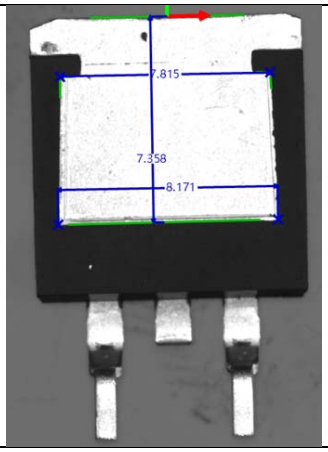
Change description

Lead Frame change (D2PAK)		
Appearance change (D2PAK)		

Note: Other package outline dimensions have not changed.

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Reliability Report

Part Number: MBRL40100CT-BP

Date: 2024-01-03

Test Results： PASS

Test Item	Conditions	Duration	Quantity	Rejects
TEST Pre- and Post-Stress Electrical Test	T_a = 25 °C	N/A	all parts	see below
HTRB High Temperature Reverse Bias	MIL-STD-750 Method 1038 $T_j = T_{jmax}$, 80% VR	1000 hours	77Pcs	0
TC Temperature Cycling	JESD22-A104 -55℃(+0,-10)/15Min~ 150(+15,-0)/15Min,	1000Cycles（500hours）	77Pcs	0
AC Autoclave	JESD22-A102 T_a = 121 °C±2℃, RH = 100 %, 15psig	96 hours	77Pcs	0
H3TRB High Humidity High Temperature Reverse Bias	JESD22-A101 T_a = 85 °C±2℃ ， RH = 85%±5%, 80 % VR（VR MAX=100V）	1000 hours	77Pcs	0
IOL Intermittent Operating Life	MIL-STD-750 Method 1037 ON 2Min/OFF 2min, ΔT_j = 100 °C	15000 cycles（1000 hours）	77Pcs	0
RSH Resistance to Solder Heat	JESD22-B106 270 °C ± 5 °C,	7s（+2,-0）	30Pcs	0
SD Solderability	J-STD-002 235 °C ± 5 °C	3 s	10Pcs	0
HTSL High Temperature Storage Life	JESD22-A103 TstgMax	1000 hours	77Pcs	0

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Reliability Report

Part Number: MBRBL40100CT-TP

Date: 2024-01-03

Test Results： PASS

Test Item	Conditions	Duration	Quantity	Rejects
TEST Pre- and Post-Stress Electrical Test	T_a = 25 °C	N/A	all parts	see below
HTRB High Temperature Reverse Bias	MIL-STD-750 Method 1038 $T_j = T_{jmax}$, 80% VR	1000 hours	77Pcs	0
TC Temperature Cycling	JESD22-A104 -55℃(+0,-10)/15Min~ 150(+15,-0)/15Min,	1000Cycles（500hours）	77Pcs	0
AC Autoclave	JESD22-A102 T_a = 121 °C±2℃, RH = 100 %, 15psig	96 hours	77Pcs	0
H3TRB High Humidity High Temperature Reverse Bias	JESD22-A101 T_a = 85 °C±2℃ ， RH = 85%±5%, 80 % VR（VR MAX=100V）	1000 hours	77Pcs	0
IOL Intermittent Operating Life	MIL-STD-750 Method 1037 ON 2Min/OFF 2min, ΔT_j = 100 °C	15000 cycles（1000 hours）	77Pcs	0
RSH Resistance to Solder Heat	JESD22-B106 270 °C ± 5 °C,	7s（+2,-0）	30Pcs	0
SD Solderability	J-STD-002 235 °C ± 5 °C	3 s	10Pcs	0
HTSL High Temperature Storage Life	JESD22-A103 TstgMax	1000 hours	77Pcs	0

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Date: 07 May 2024

PCN #: 050724-1

PCN Title: Re-design the lead frame for TO-220AB and D2PAK.

Dear Customer.

This is a PCN announcement to the above-mentioned product which is/are offered by Micro Commercial Components Corp (MCC). We would appreciate your acknowledgement of receipt of this notification within 30 days of the date of this PCN to your local ISR, sales representative. Please refer to the attached document for more information (including implementation date / product date code of this change). If you have any questions or concerns related to this PCN, please contact your local sales representative / ISR for support. *Sincerely, MCC PCN Team*

Thank you.

Yours sincerely,

PCN Team