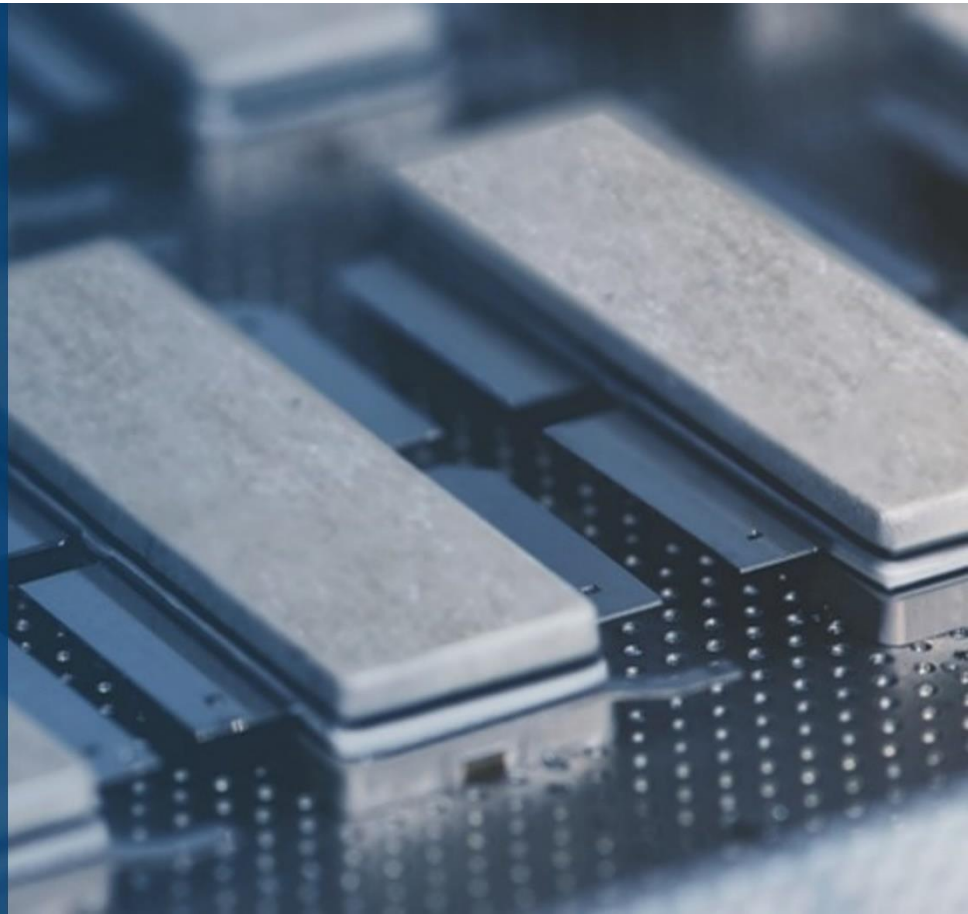


November 15, 2022

**BLC10G27LS-320AVT**  
**Conversion from ACP2 to**  
**ACP3 package**



# Background

- Currently, BLC10G27LS-320AVT is build in the older ACP2 package platform.
- The volumes AMPLEON produces in the ACP2 platform is declining for several years now. As part of its Quality First Program, AMPLEON is phasing out its smaller volume suppliers and smaller volume packages. Less variation is higher quality. This is the essence of DfM: reduce variation.
- For the BLC10G27LS-320AVT, this means that it will be converted to the newer ACP3 platform, which is also used for AMPLEON's high volume Firestorm and High Voltage LDMOS products.

# Changes

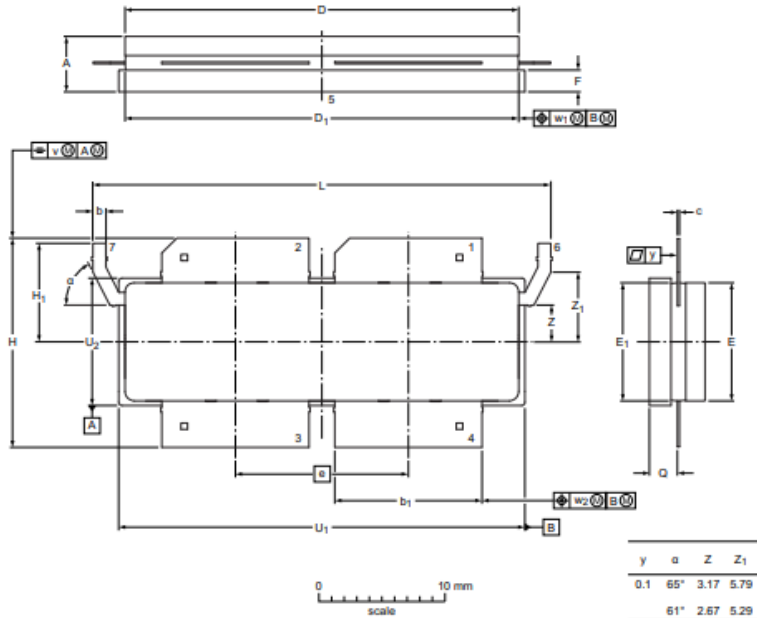
Description	From ACP2	To ACP3
Flange (soldering on)	CPC	Cu (PPF)
Die bond material LDMOS	Au(Si) eutectic	AuSn
Die bond material Passives	Au(Si) eutectic	CDAF
Q Height (nom)	2.23mm	2.14mm

# Dimensional Changes

Air cavity plastic earless flanged package; 6 leads

SOT1258-1

## ACP2



Dimensions

Unit	A	b	b <sub>1</sub>	c	D	D <sub>1</sub>	E	E <sub>1</sub>	e	L	F	H	H <sub>1</sub>	Q <sup>(1)</sup>	U <sub>1</sub>	U <sub>2</sub>	v	w <sub>1</sub>	w <sub>2</sub>
max	4.65	1.12	11.78	0.2	31.44	31.34	9.60	9.50		36.42	1.83	16.71	8.12	2.33	32.33	10.23	0.5	0.5	0.5
nom									13.72										
min	4.18	0.91	11.58	0.1	31.04	31.14	9.20	9.30		36.22	1.63	16.51	7.62	2.13	32.13	10.03			

Note

- Dimension Q is measured 0.1 mm away from the flange.
- Ringframe and/or ringframe glue shall not overhang at the side of the flange.

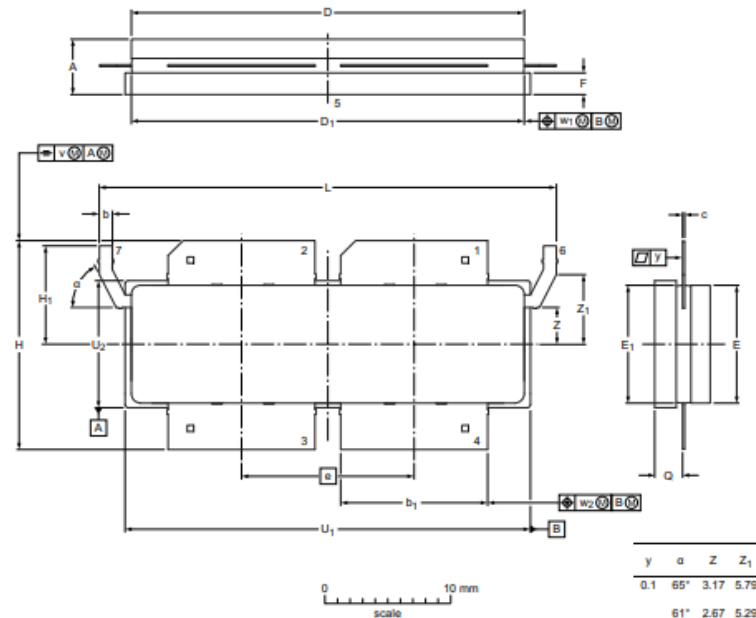
acr1258-1\_jso

Outline version	References			European projection	Issue date
	IEC	JEDEC	JEITA		
SOT1258-1					14-02-24 17-08-31

Air cavity plastic earless flanged package; 6 leads

SOT1258-4

## ACP3



Dimensions

Unit	A	b	b <sub>1</sub>	c	D	D <sub>1</sub>	E	E <sub>1</sub>	e	L	F	H	H <sub>1</sub>	Q <sup>(1)</sup>	U <sub>1</sub>	U <sub>2</sub>	v	w <sub>1</sub>	w <sub>2</sub>
max	4.52	1.12	11.78	0.18	31.44	31.34	9.60	9.50		36.42	1.73	16.71	8.12	2.25	32.33	10.23	0.5	0.5	0.5
nom									13.72										
min	4.12	0.91	11.58	0.13	31.04	31.14	9.20	9.30		36.22	1.53	16.51	7.62	2.03	32.13	10.03			

Note

- Dimension Q is measured 0.1 mm away from the flange.
- Ringframe and/or ringframe glue shall not overhang at the side of the flange.

acr1258-4\_jso

Outline version	References			European projection	Issue date
	IEC	JEDEC	JEITA		
SOT1258-4					17-08-31

# Qualification Plan and results

- Goal is to obtain similar RF and DC performance for the changed product in order to provide a drop-in replacement. Assessment was done showing all parameters meeting our Delta/Sigma requirements, except for:
  - Gain; the distribution fits well within the ACP2 production distribution, but the median shifted -0.3dB. Additional batches are being built to validate this small shift which is in line with earlier findings at the release of ACP3.
  - Rth; a significant improvement on the Rth. The typical Rth(j-case) will improve from 0.24K/W to 0.20K/W.
- No new reliability tests required for this change. The converted product fits within the scope of the ACP3 platform release.

# Planning

	Nov'22	Dec'22	Jan'23	Feb'23	Mar'23	Apr'23
PCN						
CES						
R-gate						
Datasheet update						
Stock replacement						
First products shipped*						

\* Exact time of implementation depends on consumption of stock, which of course depends on the demand, date of PCN acceptance, stock levels, etc



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