

BFY193C to ESCC Detail Specification

- BFY193C contains 6" die T359C
- BFY193 is already in ESCC Detail Specification
- For Comparison refer to similarity matrix:



Similarity matrix

- All parameters currently covered by ESCC Detail Specification are identical for BFY193 and BFY193C
- Some customers prefer BFY193C due to much better 1/f noise
- Measurement of 1/f noise:

BFY193	[nV/ $\sqrt{\text{Hz}}$]:	205 – 1650	(88 pcs.)
BFY193C	[nV/ $\sqrt{\text{Hz}}$]:	110 – 170	(50 pcs.)

Proposal:

Attach BFY193C to ESCC Detail Specification 5611 006:

- Implement new variant 08 in the document, all entries for variant 06 are also valid for variant 08


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TABLE 1(a) - TYPE VARIANTS

(1) VARIANT	(2) TYPE	(3) CASE	(4) FIGURE	(5) LEAD MATERIAL AND FINISH
01	BFY180	MICRO-X1	2	D2
02	BFY280	MICRO-X1	2	D2
03	BFY181	MICRO-X1	2	D2
04	BFY182	MICRO-X1	2	D2
05	BFY183	MICRO-X1	2	D2
06	BFY193	MICRO-X1	2	D2
07	BFY196	MICRO-X1	2	D2

Proposal:

- Document only difference between BFY193 and BFY193C by introducing a new row in Tab. 2 for 1/f Noise which will be measured according LTPD15 sample testing per wafer. Limit < 300 nV/Hz

14	Output Power	P _{OUT}	4(b)	f = 2GHz, V _{CE} = 5V Variant 05: I _C = 30mA, P _{IN} = 7dBm Variant 06: I _C = 50mA, P _{IN} = 10dBm Variant 07: I _C = 80mA, P _{IN} = 15dBm (Notes 5 and 11)	13.5 16.5 18.5	- - -	dBm
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NOTES

- This is an alternative method of establishing V_{(BR)CEO} and assures that V_{(BR)CEO} for Variants 01 and 02 is > 8V and for Variants 03 to 07 is > 12V, if the stated base current is not exceeded.
- Pulsed measurement: Pulse Duration, < 1 second. For the purpose of V_{FBE} measurement, I_{Bmax} may be exceeded during a pulsed measurement provided that the pulse length duration < 1 second and I_C = 0mA.
- The emitter is connected to the ground terminal.
- The collector is connected to the ground terminal.
- Measured in a 50Ω system.
- Small signal measurement.
- Input tuned for NF_{min}.
- MAG if K ≥ 1; MSG if K < 1.
- $f_T = f \times |h_{21}|$, $h_{21} = \frac{-2 \cdot S_{21}}{(1 - S_{11})(1 + S_{22}) + S_{12} \cdot S_{21}}$
- LTPD15 sample testing with the maximum allowed limit reduced by 0.2dB. In case of failure, 100% testing shall be applied.
- LTPD15 sample testing with the minimum allowed limit increased by 0.5dB. In case of failure, 100% testing shall be applied.