

# VAS transistors: Hifisonix ax-Amp, nx2-Amp and kx2-Amp

- Many builders are struggling to get hold of the [2SC3503](#) and [2SA1381](#) VAS transistors used in the Hifisonix amplifier builds (and other non-Hifisonix designs). These were also supplied by Fairchild and latterly ON as the KSC3503 and KSA1381. They featured very low  $C_{ob}$  (~6pF), good  $h_{FE}$  vs  $I_c$  linearity, and very high Early voltage.
- The good news is the Toshiba [TTA004B](#) and [TTC004B](#) devices below make excellent replacements. Although  $C_{ob}$  is not as low as the originals, its good enough in almost all cases to not interfere with amplifier compensation, or cause distortion problems.
- Note that these devices can also be successfully used in the driver transistor position to replace the now discontinued KSC2690 and KSA1220 devices as used in the nx2-Amplifier since the collector current rating of the Toshiba devices is > 1A.

Original VAS type	Toshiba replacement
2SC3503	TTC004B
2SA1381	TTA004B