

Exicon Selected MOSFETs

rev 1.3 28/03/2023

Selected MOSFETs offer better reliability when used in parallel for high power applications.

The Exicon MOSFETs are designed for audio amplifiers. Unlike bi-polar transistors, they are well matched from N channel to P channel, resulting in high performance, low distortion audio. There is variation on parameters, notably threshold voltage. Although Lateral MOSFET variation is an order of magnitude better than switching MOSFETs, the selected versions offer closer matching on this parameter.

The matching is offered between MOSFETs of the same polarity and not between N to P channel. The benefit of closer matching on threshold voltage is the omission of current sharing source resistors even for high power amplifiers with many devices in parallel.



Notes

1. The test bands are different for N channel and P channel - see below.
2. There is no benefit from having the same colour dot as the test bands are not the same.
3. Matching N channel to P channel on threshold can be achieved in the amplifier by adding a DC offset to the gate drive.

Test conditions

Part	V_{GS}	V_{DS}
ECX10N20-S	0.5	25
ECF10N20-S		
ECW20N20-S		
ECF20N20-S		
ECX10P20-S	1.0	25
ECF10P20-S		
ECW20P20-S		
ECF20P20-S		

Colour Band	ECX10 / ECF10 Series		ECW20 / ECF20 Series	
	Min I_D - mA	Max I_D - mA	Min I_D - mA	Max I_D - mA
Pink	75	90	150	180
Violet	90	105	180	210
Red	105	120	210	240
Orange	120	135	240	270
Yellow	135	150	270	300
Green	150	165	300	330
Blue	165	180	330	360
White	180	205	360	410