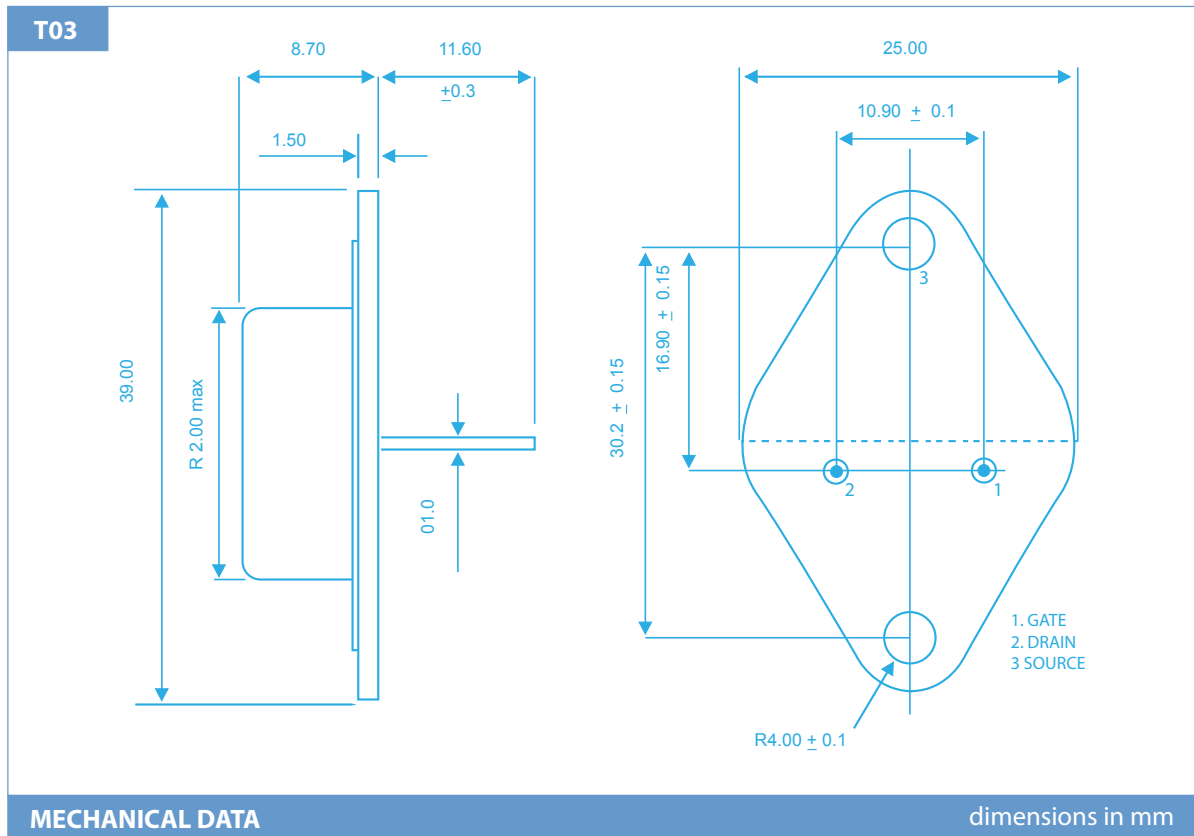


HIGH POWER 125W HIGH QUALITY AUDIO AMPLIFIER APPLICATIONS

N & P CHANNEL LATERAL MOSFETs



ABSOLUTE MAXIMUM RATINGS

($T_C = 25^\circ\text{C}$ unless otherwise stated)

(ECF10)20

V_{DSX}	Drain – Source Voltage	200V
V_{GSS}	Gate – Source Voltage	±14V
I_D	Continuous Drain Current	8A
$I_{D(PK)}$	Body Drain Diode	8A
P_D	Total Power Dissipation @ ($T_{case} = 25^\circ\text{C}$)	125W
T_{stg}	Storage Temperature Range	-55 to 150°C
T_j	Maximum Operating Junction Temperature	150°C
$R\theta_{JC}$	Thermal Resistance Junction - case	1.0°C/W

Exicon products are available at www.profusionplc.com

STATIC CHARACTERISTICS (T_C= 25°C unless otherwise stated)

Characteristic	Test Conditions	MIN	TYP	MAX	UNIT
BV _{DSX}	Drain – Source Breakdown Voltage ID = 10mA (ECF10)20		200		V
BV _{GSS}	Gate – Source Breakdown Voltage VDS = 0 IG=±100uA	±14			V
V _{GS(OFF)}	Gate - Source Cut-Off Voltage VDS = 10V ID = 100mA	0.15		1.5	V
V _{DS(SAT)*}	Drain - Source Saturation Voltage VGD = 0 ID = 8A			12	V
I _{DSX}	Drain - Source Cut - Off Current VGS = -10V		VDS = 160V (ECF10)16 VDS =200V (ECF10)20	10 10	mA
Yfs*	Forward Transfer Admittance VDS = 10V ID = 3A	0.7		2	S

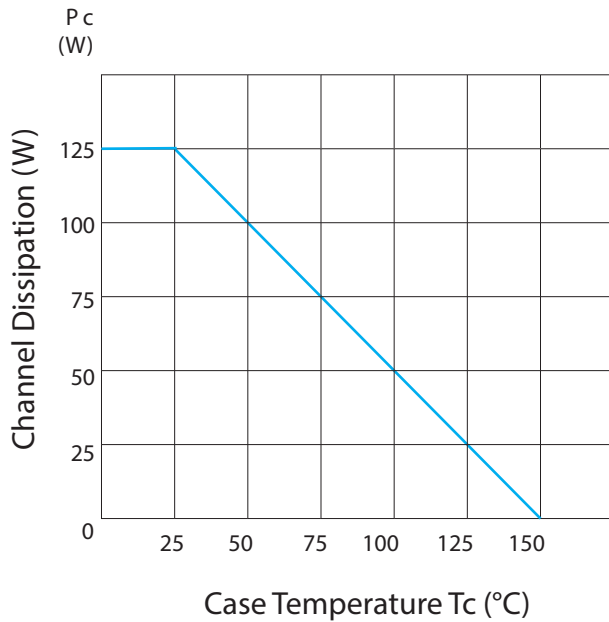
DYNAMIC CHARACTERISTICS (T_C= 25°C unless otherwise stated)

Characteristic	Test Conditions	N-Channel	P-Channel	UNIT
C _{iss}	Input Capacitance	500	700	
C _{oss}	Output Capacitance VDS= 10V f = 1MHz	300	300	pF
C _{rss}	Reverse Transfer Capacitance	10	25	
t _{on}	Turn-on Time VDS= 20V ID = 7A	100	120	ns
t _{off}	Turn-off Time	50	60	

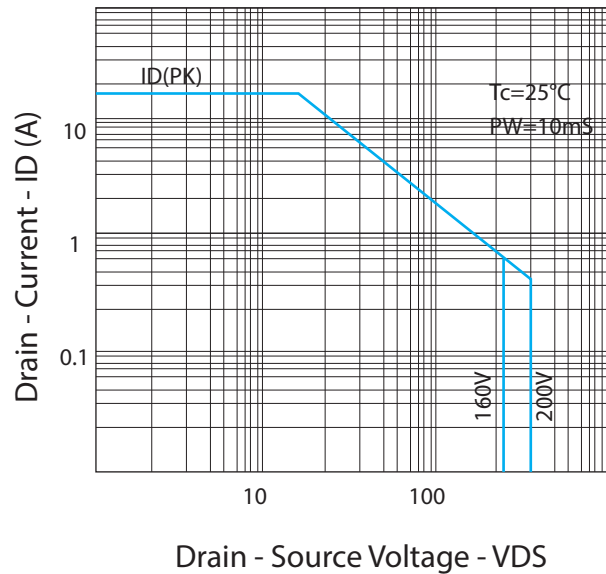
* Pulse Test: Pulse Width = 300μs, Duty Cycle ≤ 2%

Typical Characteristics for 125W devices

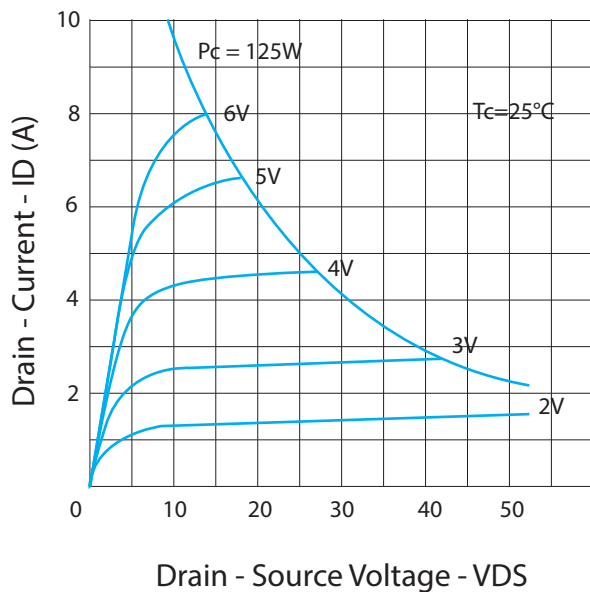
Power vs. Temperature Derating



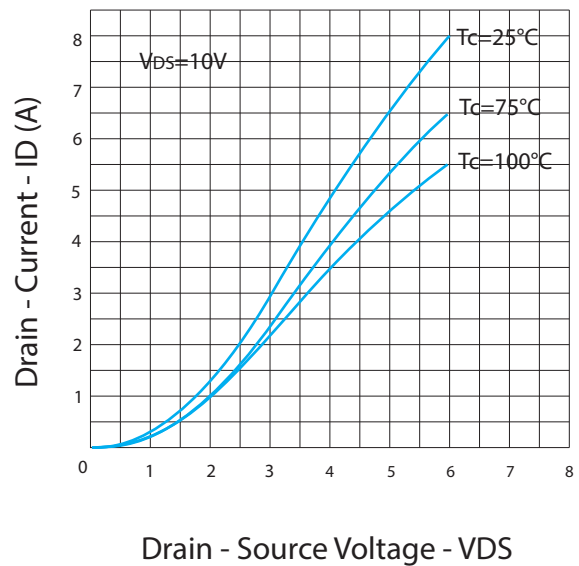
Maximum Safe Operating Area



Typical Output (N-Channel)



Typical Transfer Characteristics (N-Channel)



Typical Characteristics for 125W devices (cont.)

Forward Transfer Admittance (N-Channel)

