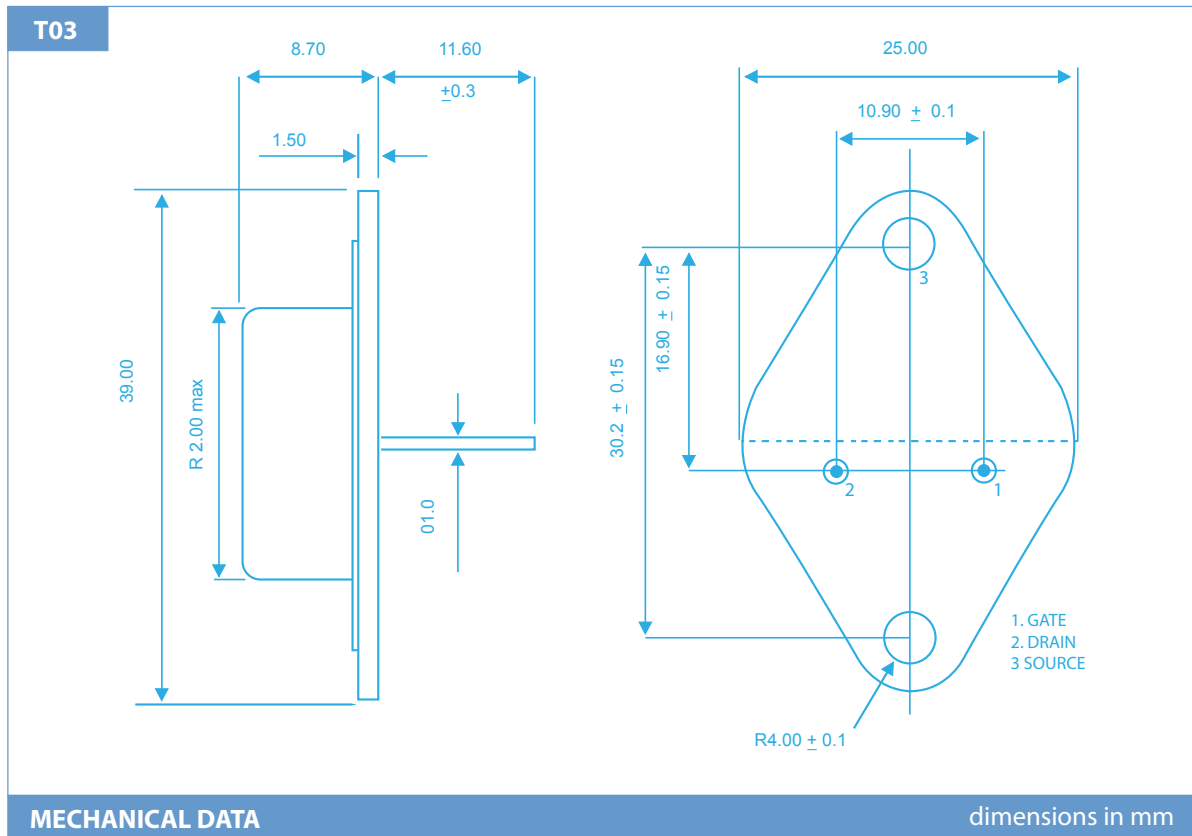


HIGH POWER 125W
HIGH QUALITY AUDIO AMPLIFIER APPLICATIONS

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

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

Characteristic	Test Conditions	MIN	TYP	MAX	UNIT
BV_{DSX}	Drain – Source Breakdown Voltage $ID = 10\text{mA}$ (ECF10)20		200		V
BV_{GSS}	Gate – Source Breakdown Voltage $V_{DS} = 0$ $I_{G} = \pm 100\mu\text{A}$	± 14			V
$V_{GS(OFF)}$	Gate - Source Cut-Off Voltage $V_{DS} = 10\text{V}$ $ID = 100\text{mA}$	0.15		1.5	V
$V_{DS(SAT)^*}$	Drain - Source Saturation Voltage $V_{GD} = 0$ $ID = 8\text{A}$			12	V
I_{DSX}	Drain - Source Cut - Off Current $V_{GS} = -10\text{V}$		$V_{DS} = 160\text{V}$ (ECF10)16 $V_{DS} = 200\text{V}$ (ECF10)20	10 10	mA
Y_{fs}^*	Forward Transfer Admittance $V_{DS} = 10\text{V}$ $ID = 3\text{A}$	0.7		2	S

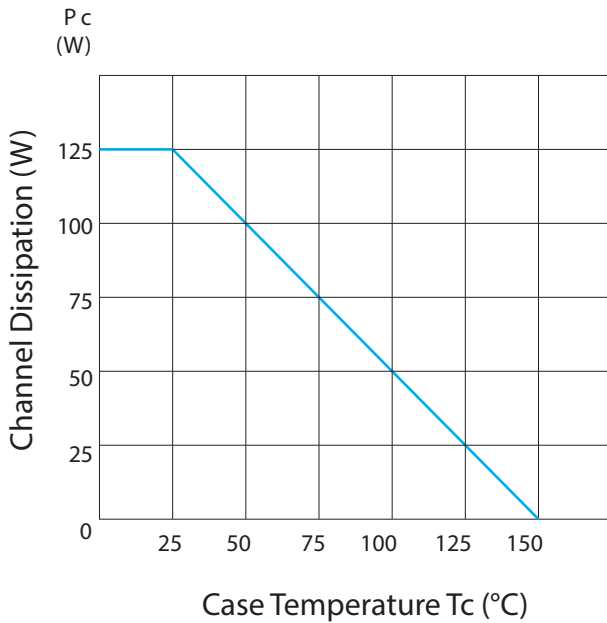
DYNAMIC CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise stated)

Characteristic	Test Conditions	N-Channel	P-Channel	UNIT
C_{iss}	Input Capacitance	500	700	
C_{oss}	Output Capacitance $V_{DS} = 10\text{V}$ $f = 1\text{MHz}$	300	300	pF
C_{rss}	Reverse Transfer Capacitance	10	25	
t_{on}	Turn-on Time $V_{DS} = 20\text{V}$	100	120	ns
t_{off}	Turn-off Time $ID = 7\text{A}$	50	60	

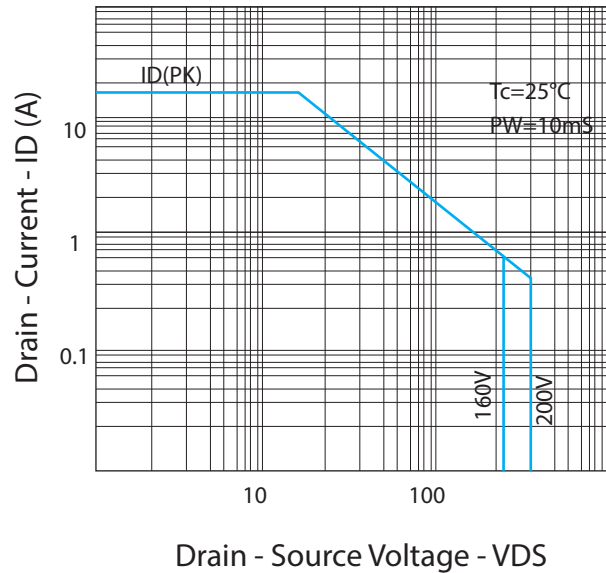
* Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2\%$

Typical Characteristics for 125W devices

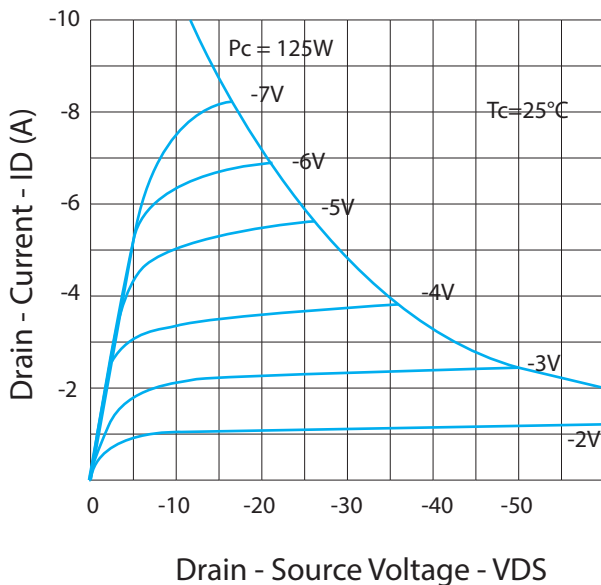
Power vs. Temperature Derating



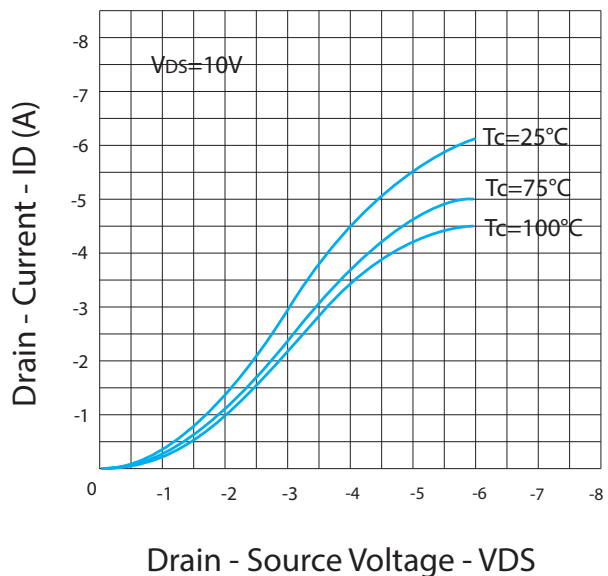
Maximum Safe Operating Area



Typical Output (P-Channel)



Typical Transfer Characteristics (P-Channel)



Typical Characteristics for 125W devices (cont.)

Forward Transfer Admittance (P-Channel)

