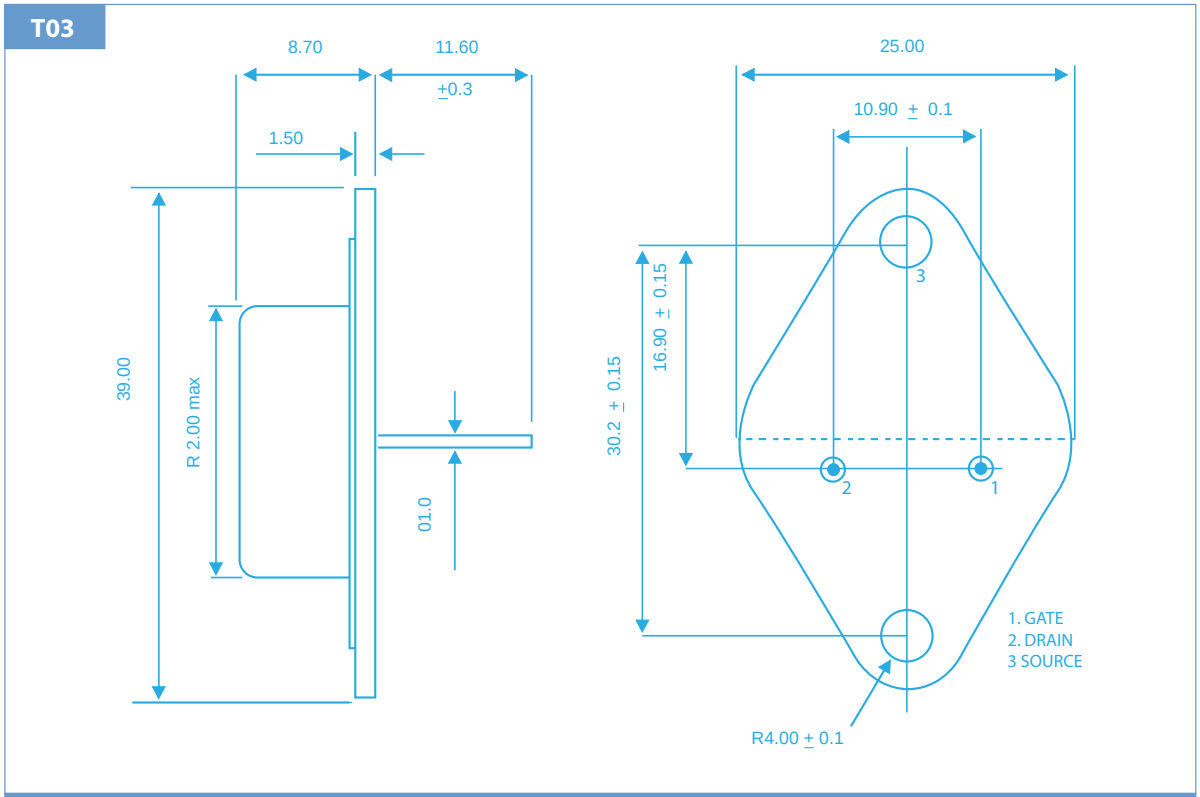
HIGH POWER 125W
HIGH QUALITY AUDIO AMPLIFIER APPLICATIONS

P CHANNEL LATERAL MOSFET

T03



MECHANICAL DATA dimensions in mm

ABSOLUTE MAXIMUM RATINGS (T_C= 25°C unless otherwise stated)		ECF10P20
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°C)	125W
T_{stg}	Storage Temperature Range	-55 to 150°C
T_j	Maximum Operating Junction Temperature	150°C
RθJC	Thermal Resistance Junction - case	1.0°C/W

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

Characteristic		Test Conditions		MIN	TYP	MAX	UNIT
BV_{DSX}	Drain – Source Breakdown Voltage	ID = 10mA	ECF10P20		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 =200V			10	mA
Yfs*	Forward Transfer Admittance	VDS = 10V	ID = 3A	0.7		2	S

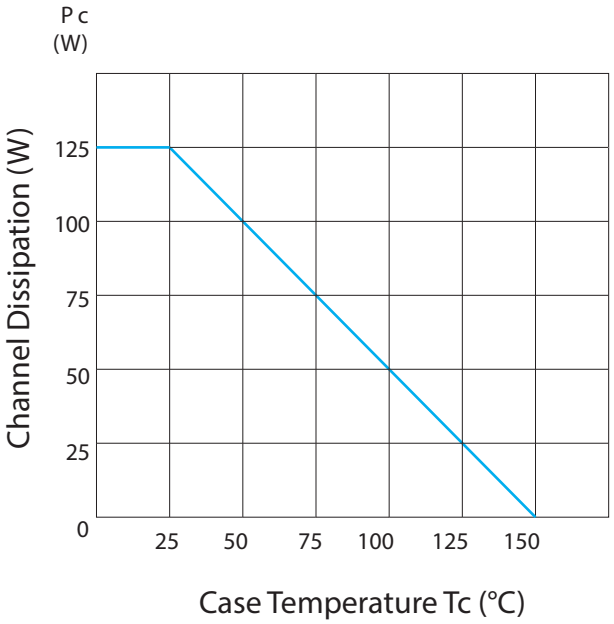
DYNAMIC CHARACTERISTICS (T_C= 25°C unless otherwise stated)

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

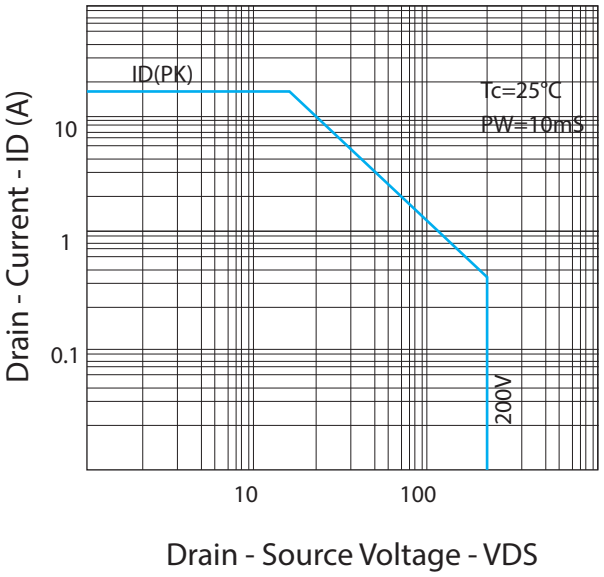
* Pulse Test: Pulse Width = 300µs, Duty Cycle ≤ 2%

Typical Characteristics for 125W devices

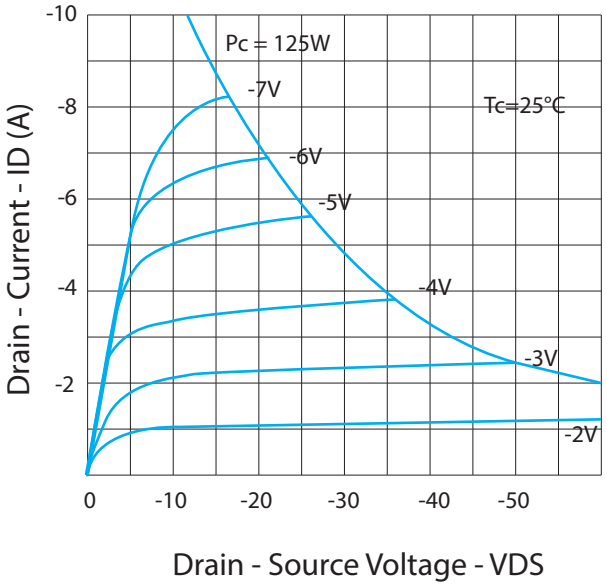
Power vs. Temperature Derating



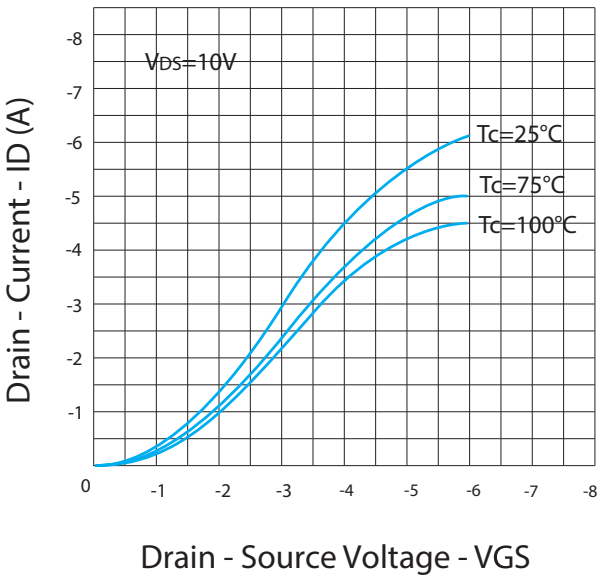
Maximum Safe Operating Area



Typical Output (P-Channel)



Typical Transfer Characteristics (P-Channel)



Typical Characteristics for 125W devices (cont.)

Forward Transfer Admittance (P-Channel)