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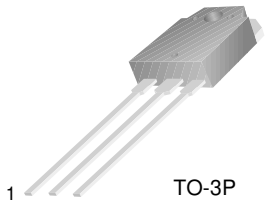
SEMICONDUCTOR®

KSC4010

Audio Power Amplifier

- High Current Capability : I_C=6A
- High Power Dissipation
- Wide S.O.A
- Complement to KSA3010



TO-3P

1.Base 2.Collector 3.Emitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	6	A
I_{CP}	Collector Current (Pulse)	12	A
P_C	Collector Dissipation (T_C=25°C)	60	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 50 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	V_{CB}= 120V, I_E= 0	-	-	10	μA
I_{EBO}	Emitter Cut-off Current	V_{EB}= 5V, I_C= 0	-	-	10	μA
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C= 5A,, I_B= 0	120	-	-	V
h_{FE}	DC Current Gain	V_{CE}= 5V, I_C= 1A,	55	-	160	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C= 5A, I_B= 0.5A	-	-	2.5	V
V_{BE}(on)	Base-Emitter ON Voltage	V_{CE}= 5V, I_C= 5A	-	-	1.5	V
f_T	Current Gain Bandwidth Product	V_{CE}= 5V, I_C= 1A	-	30	-	MHz
C_{ob}	Output Capacitance	V_{CB}=10V, I_E=0, f=1MHz	-	90	-	pF

h_{FE} Classification

Classification	R	O
h_{FE}	55 ~ 110	80 ~ 160

Typical Characteristics

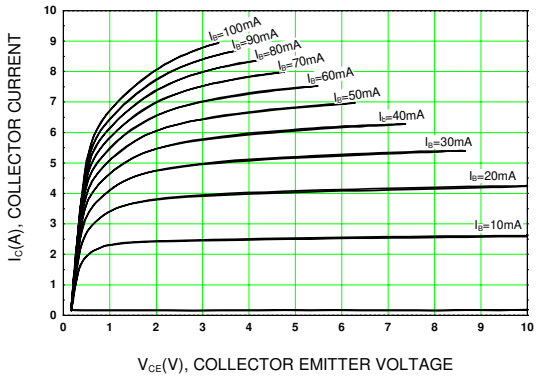


Figure 1. Static Characteristic

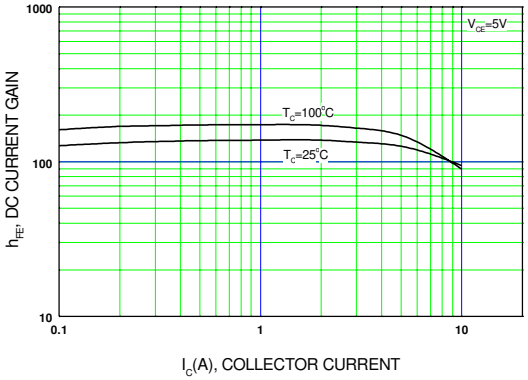


Figure 2. DC current Gain

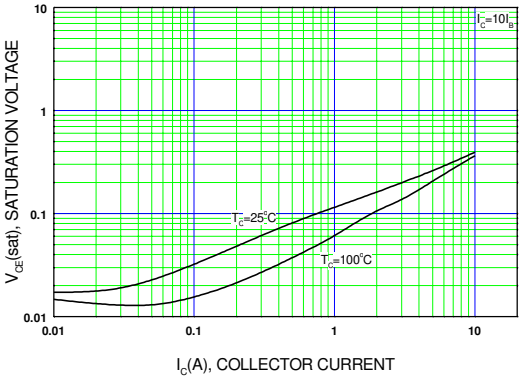


Figure 3. Collector-Emitter Saturation Voltage

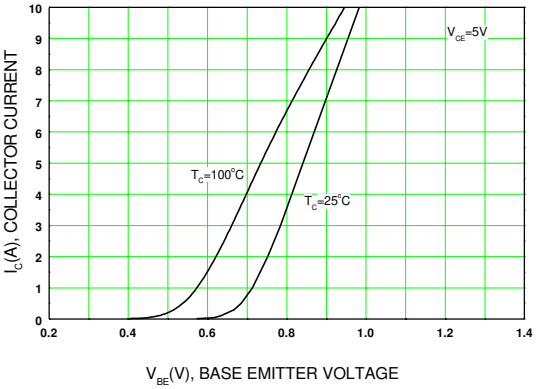


Figure 4. Base-Emitter On Voltage

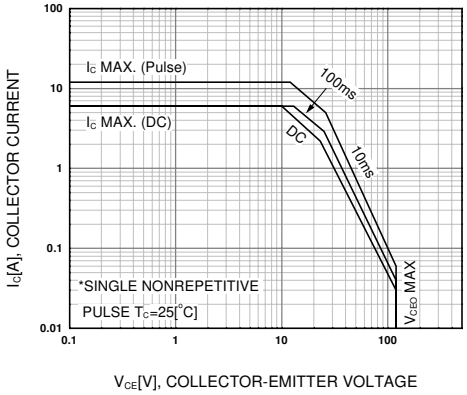


Figure 5. Safe Operating Area

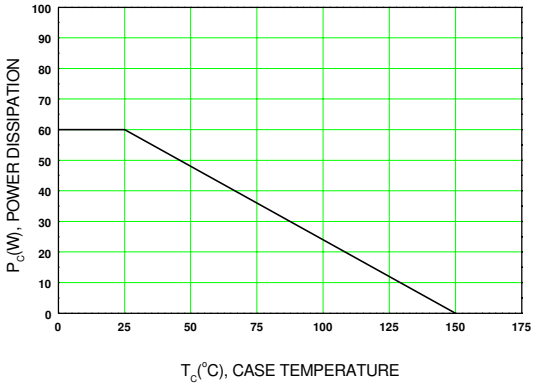
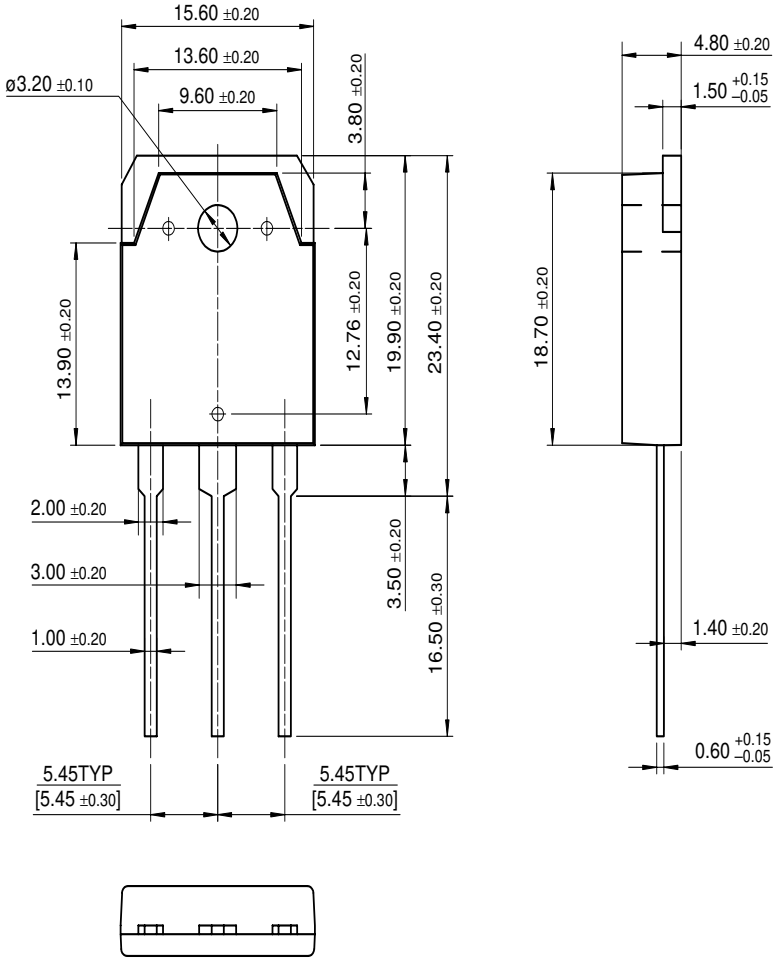


Figure 6. Power Derating

Package Demensions

TO-3P



Dimensions in Millimeters

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DOME™	HiSeC™	PowerTrench®	SuperSOT™-8	
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