



**THE DATASHEET OF
KSC40100TU**

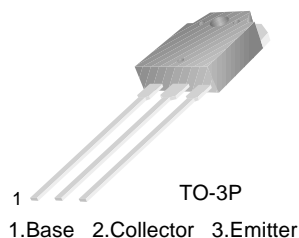


KSC4010

KSC4010

Audio Power Amplifier

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



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ C$ 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 ($T_C=25^\circ C$)	60	W
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	- 50 ~ 150	$^\circ C$

Electrical Characteristics $T_C=25^\circ C$ 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

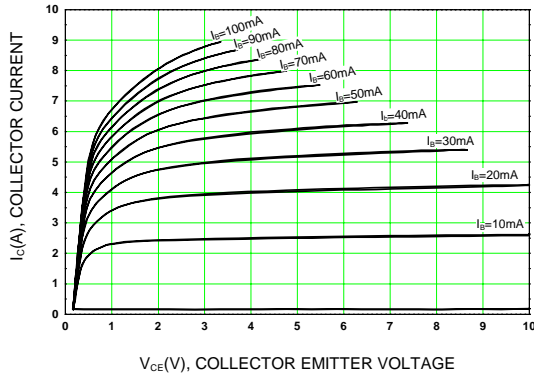


Figure 1. Static Characteristic

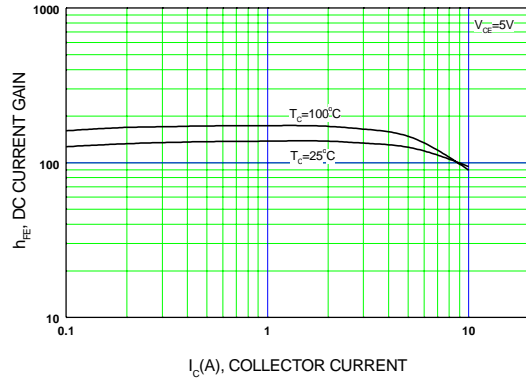


Figure 2. DC current Gain

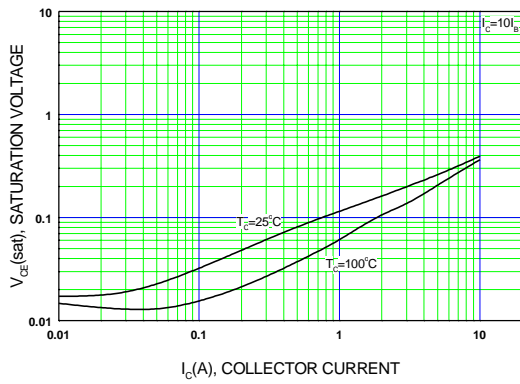


Figure 3. Collector-Emitter Saturation Voltage

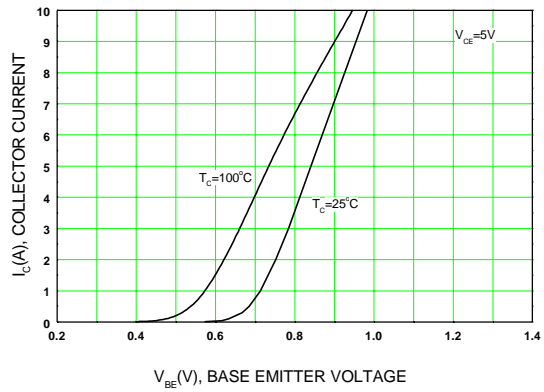


Figure 4. Base-Emitter On Voltage

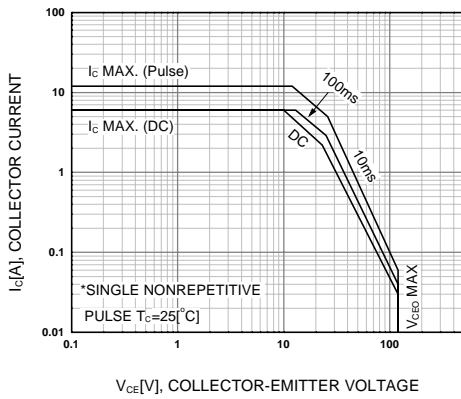


Figure 5. Safe Operating Area

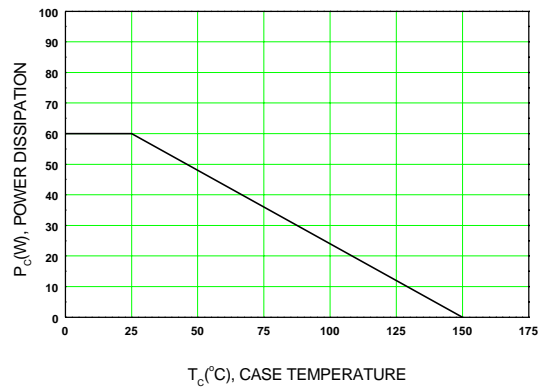
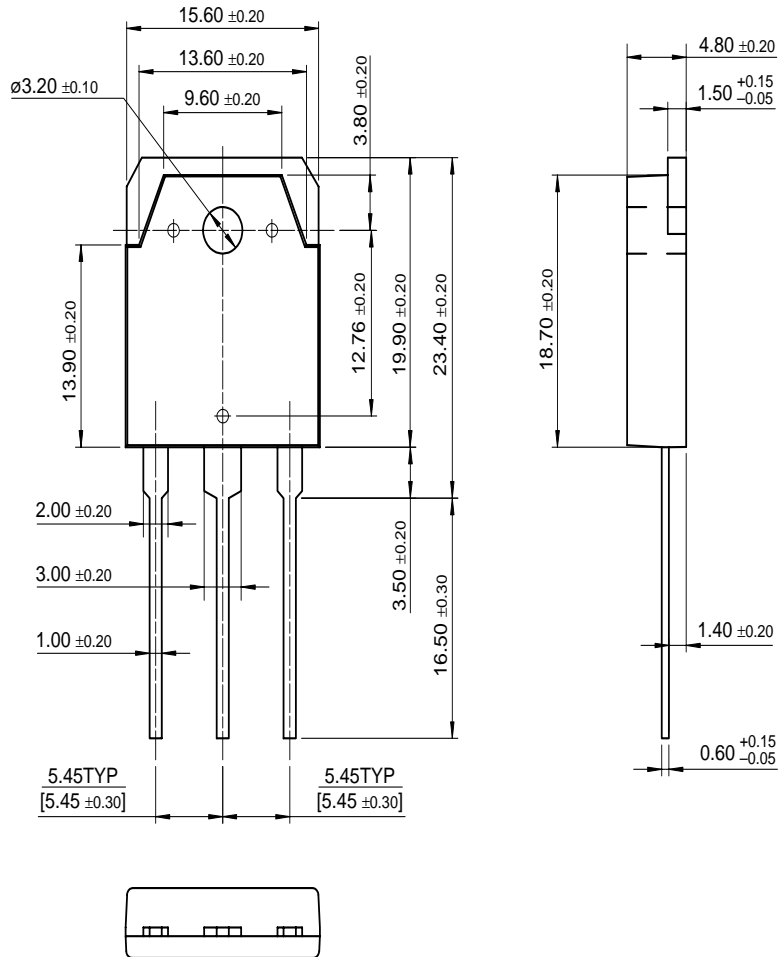


Figure 6. Power Derating

Package Dimensions

KSC4010

TO-3P



Dimensions in Millimeters

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