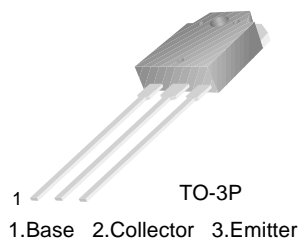


# KSC4010

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	$\mu A$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB}=5V, I_C=0$	-	-	10	$\mu A$
$BV_{CEO}$	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

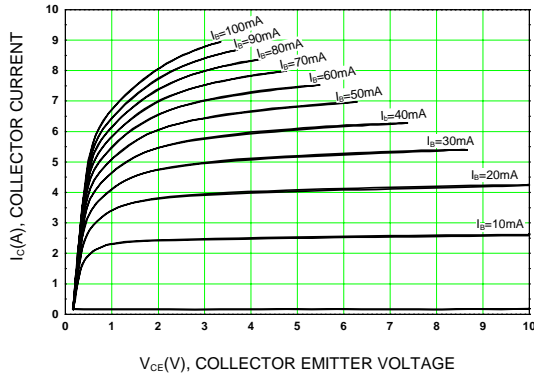


Figure 1. Static Characteristic

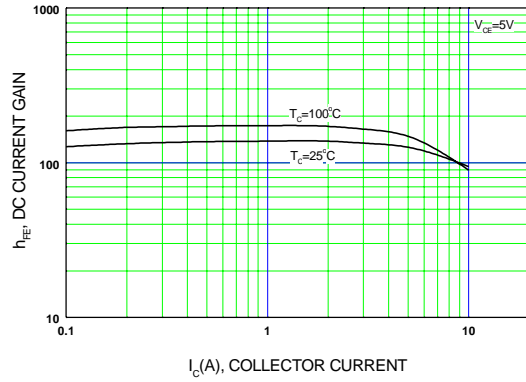


Figure 2. DC current Gain

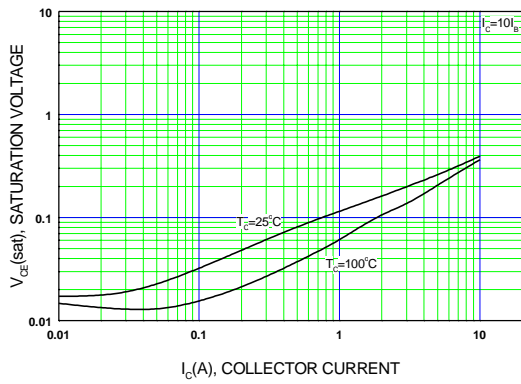


Figure 3. Collector-Emitter Saturation Voltage

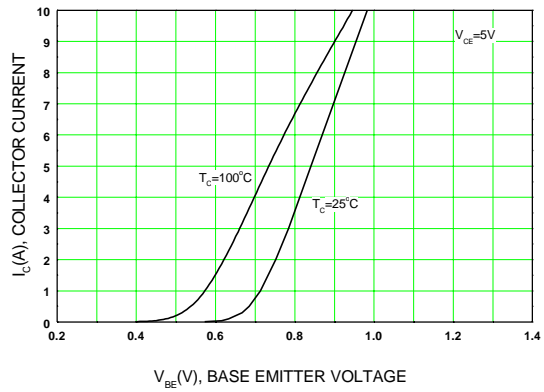


Figure 4. Base-Emitter On Voltage

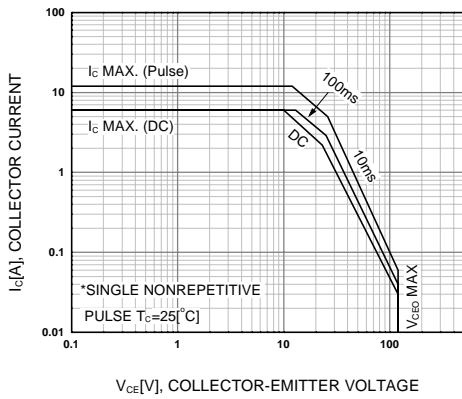


Figure 5. Safe Operating Area

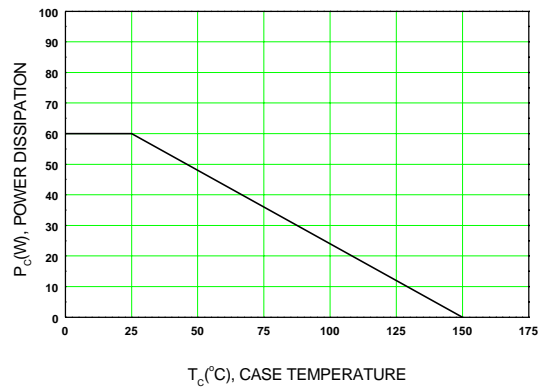
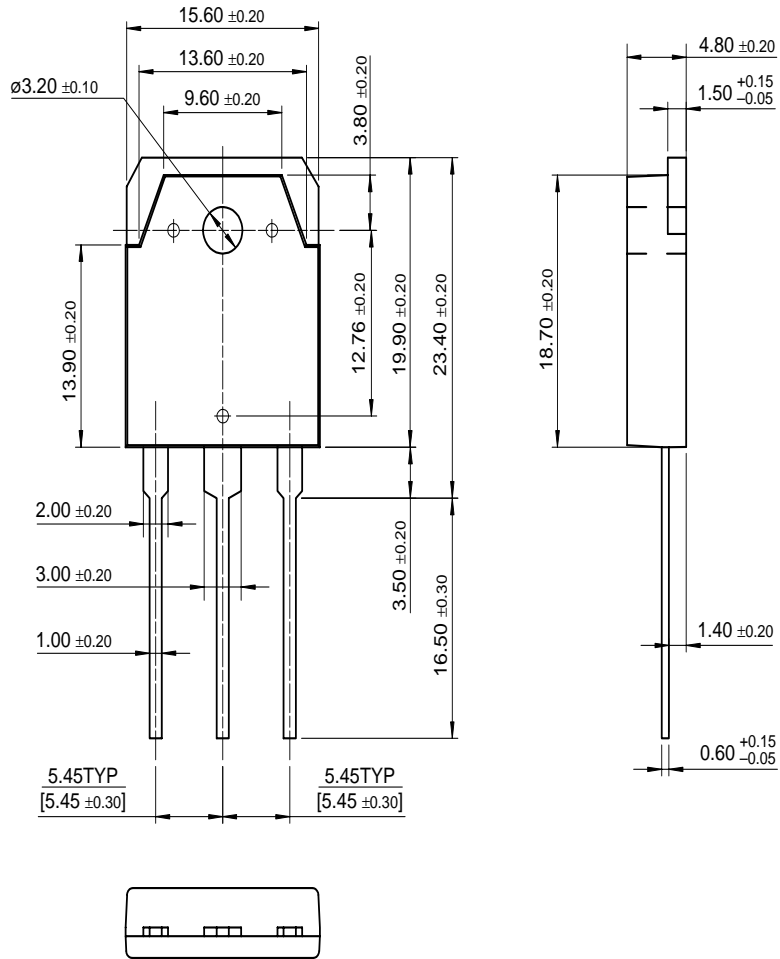


Figure 6. Power Derating

# Package Dimensions

KSC4010

## TO-3P



Dimensions in Millimeters

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CROSSVOLT <sup>TM</sup>	GlobalOptoisolator <sup>TM</sup>	POP <sup>TM</sup>	SuperSOT <sup>TM</sup> -3	
DenseTrench <sup>TM</sup>	GTO <sup>TM</sup>	Power247 <sup>TM</sup>	SuperSOT <sup>TM</sup> -6	
DOMET <sup>TM</sup>	HiSeC <sup>TM</sup>	PowerTrench <sup>®</sup>	SuperSOT <sup>TM</sup> -8	
EcoSPARK <sup>TM</sup>	ISOPLANAR <sup>TM</sup>	QFET <sup>TM</sup>	SyncFET <sup>TM</sup>	
E <sup>2</sup> CMOS <sup>TM</sup>	LittleFET <sup>TM</sup>	QS <sup>TM</sup>	TruTranslation <sup>TM</sup>	
EnSigna <sup>TM</sup>	MicroFET <sup>TM</sup>	QT Optoelectronics <sup>TM</sup>	TinyLogic <sup>TM</sup>	
FACT <sup>TM</sup>	MicroPak <sup>TM</sup>	Quiet Series <sup>TM</sup>	UHC <sup>TM</sup>	
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