

January 2007

KSA3010 PNP Epitaxial Silicon Transistor

- Audio Power Amplifier
- High Current Capability: I_C = -6A
- High Power Dissipation
- · Wide S.O.A
- Complement to KSC4010



Absolute Maximum Ratings* Ta=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	А
I _{CP}	Collector Current (Pulse)	-12	А
P _C	Collector Dissipation (T _C =25°C)	60	W
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	- 50 ~ 150	°C

^{*} These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

- 1) These ratings are based on a maximum junction temperature of 150°C.
 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
$R_{\theta JC}$	Thermal Resistance, Junction to Case	2.0	°C/W

^{*} Device mounted on the minimum pad size.

Electrical Characteristics* T_a = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Тур.	Max.	Units
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C = -5A, I _B = 0	-120	-	-	V
I _{CBO}	Collector Cut-off Current	V _{CB} = -120V, I _E = 0	-	-	-10	μΑ
I _{EBO}	Emitter Cut-off Current	$V_{EB} = -5V, I_{C} = 0$	-	-	-10	μΑ
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	-	180	-	pF

^{*} Pulse Test: Pulse Width $\leq 300 \mu s$, Duty Cycle $\leq 2.0\%$

h_{FF} Classification

Classification	R	0	
h _{FE}	55 ~ 110	80 ~ 160	

Package Marking and Ordering Information

Device Item (note)	Device Marking	Package	Packing Method	Qty(pcs)
KSA3010RTU	A3010R	TO-3P	TUBE	450
KSA3010OTU	A3010O	TO-3P	TUBE	450

Note: The Suffix "-TU" means the Tube packing method, which can be on fairchildsemi website at http://www.fairchildsemi.com/packaging

Typical Characteristics

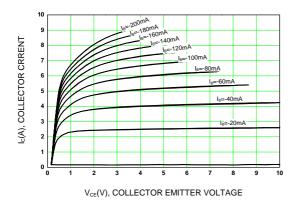


Figure 1. Static Characteristic

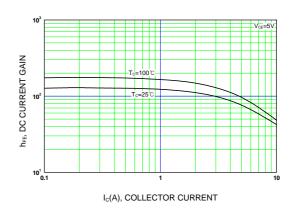


Figure 2. DC current Gain

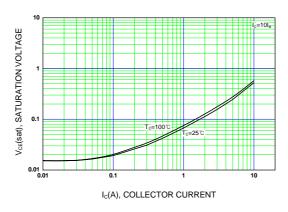


Figure 3. Collector-Emitter Saturation Voltage

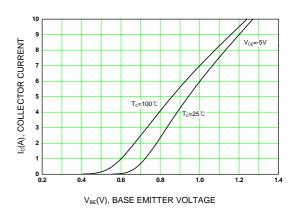


Figure 4. Base-Emitter On Voltage

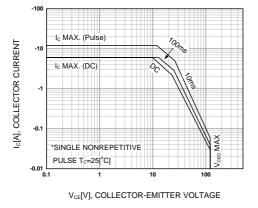


Figure 5. Safe Operating Area

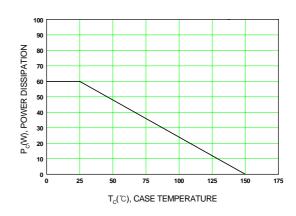


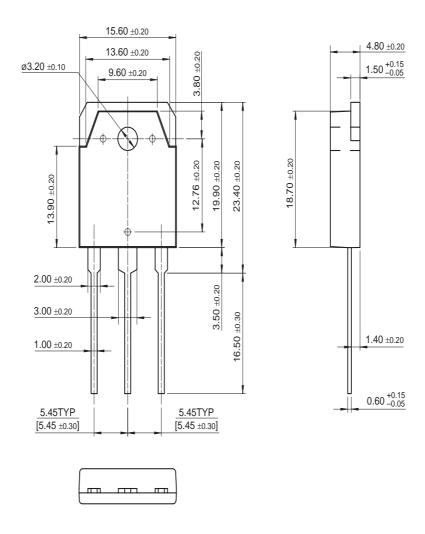
Figure 6. Power Derating

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Mechanical Dimensions

TO-3P



Dimensions in Millimeters

UniFET™

 VCX^{TM}

Wire™



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PRODUCT STATUS DEFINITIONS

Definition of Terms

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Rev. I22