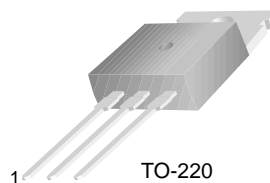


KSC1173

Low Frequency Power Amplifier Power Regulator

- Collector Current : $I_C=3A$
- Collector Dissipation : $P_C=10W$ ($T_C=25^\circ C$)
- Complement to KSA473



TO-220
1.Base 2.Collector 3.Emitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ C$ unless otherwise noted

Symbol	Parameter	Value	Units
BV_{CBO}	Collector-Base Voltage	30	V
BV_{CEO}	Collector-Emitter Voltage	30	V
BV_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	3	A
P_C	Collector Dissipation ($T_C=25^\circ C$)	10	W
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ C$

Electrical Characteristics $T_C=25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = 500\mu A, I_E = 0$	30			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = 10mA, I_B = 0$	30			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = -1mA, I_C = 0$	5			
I_{CBO}	Collector Cut-off Current	$V_{CB} = 20V, I_E = 0$			1.0	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 5V, I_C = 0$			1.0	μA
h_{FE1} h_{FE2}	DC Current Gain	$V_{CE} = 2V, I_C = 0.5A$ $V_{CE} = 2V, I_C = 2.5A$	70 25		240	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 2A, I_B = 0.2A$		0.3	0.8	V
$V_{BE(on)}$	Base-Emitter ON Voltage	$V_{CE} = 2V, I_C = 0.5A$		0.75	1.0	V
f_T	Current Gain Base Width Product	$V_{CE} = 2V, I_C = 0.5A$		100		MHz
C_{ob}	Output Capacitance	$V_{CB} = 10V, I_E = 0,$ $f = 1MHz$		35		pF

h_{FE} Classification

Classification	O	Y
h_{FE1}	70 ~ 140	120 ~ 240

Typical Characteristics

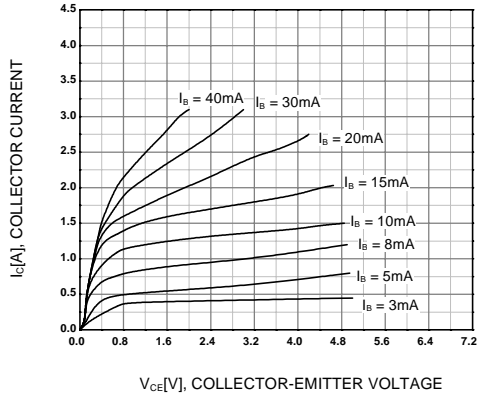


Figure 1. Static Characteristic

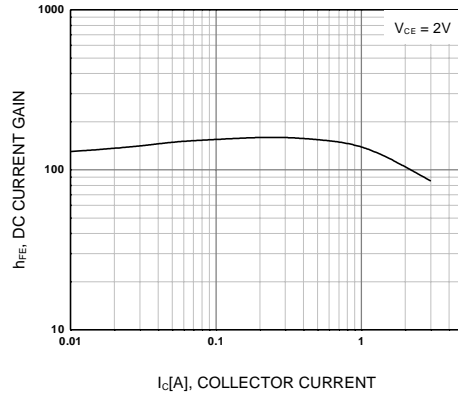


Figure 2. DC current Gain

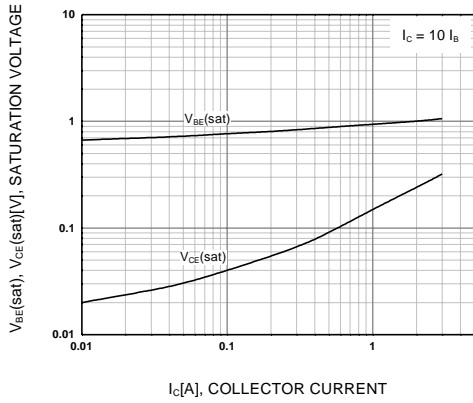


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

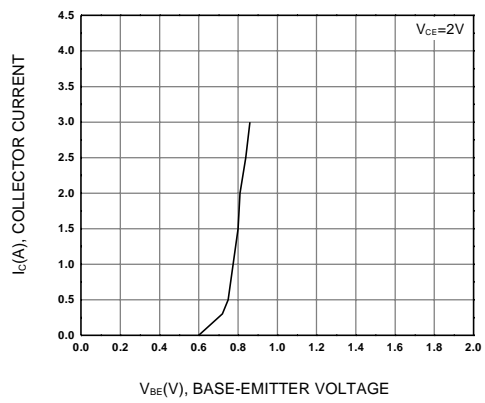


Figure 4. Base-Emitter On Voltage

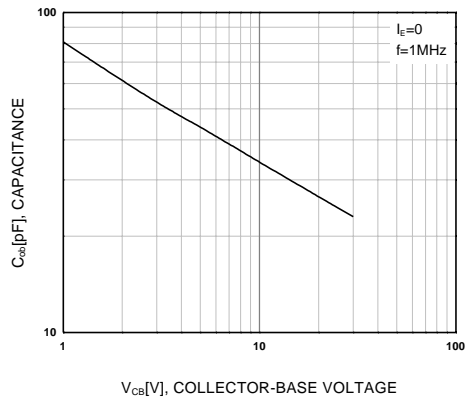


Figure 5. Collector Output Capacitance

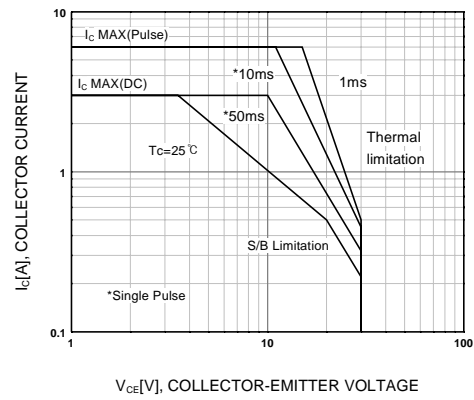


Figure 6. Safe Operating Area

Typical Characteristics (Continued)

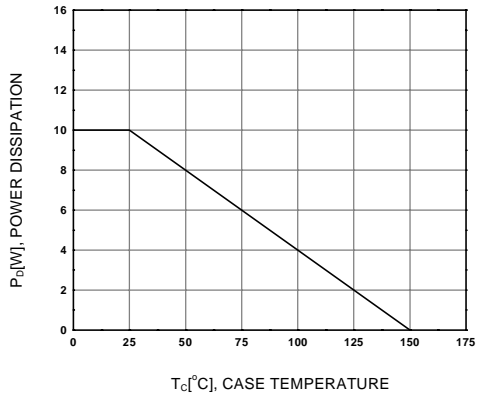


Figure 7. Power Derating

Package Dimensions

KSC1173

TO-220



Dimensions in Millimeters

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E ² CMOS™	PowerTrench®	VCX™
FACT™	QFET™	
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FASTr™	SuperSOT™-3	
GTO™	SuperSOT™-6	

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