

## **KSD227**

## **Low Frequency Power Amplifier**

- Complement to KSA642
- Collector Power Dissipation : P<sub>C</sub>=400mW



1. Emitter 2. Base 3. Collector

## **NPN Epitaxial Silicon Transistor**

## **Absolute Maximum Ratings** $T_a$ =25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
V <sub>CBO</sub>	Collector-Base Voltage	30	V
V <sub>CEO</sub>	Collector-Emitter Voltage	25	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current	300	mA
P <sub>C</sub>	Collector Power Dissipation	400	mW
TJ	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	-55 ~ 150	°C

## **Electrical Characteristics** $T_a$ =25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV <sub>CBO</sub>	Collector-Base Breakdown Voltage	$I_C=100\mu A,\ I_E=0$	30			V
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> =10mA, I <sub>B</sub> =0	25			V
BV <sub>EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> =10μA, I <sub>C</sub> =0	5			V
I <sub>CBO</sub>	Collector Cut-off Current	$V_{CB}$ =25V, $I_{E}$ =0			0.1	μΑ
I <sub>EBO</sub>	Emitter Cut-off Current	$V_{EB}=3V$ , $I_{C}=0$			0.1	μΑ
h <sub>FE</sub>	DC Current Gain	V <sub>CE</sub> =1V, I <sub>C</sub> =50mA	70		400	
V <sub>CE</sub> (sat)	Collector-Emitter Saturation Voltage	I <sub>C</sub> =300mA, I <sub>B</sub> =30mA		0.14	0.4	V

## **h**<sub>FE</sub> Classification

Classification	0	Υ	G
h <sub>FE</sub>	70 ~ 140	120 ~ 240	200 ~ 400

# **Typical Characteristics**

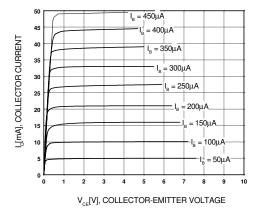


Figure 1. Static Characteristic

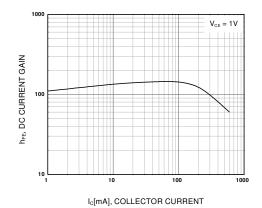


Figure 2. DC current Gain

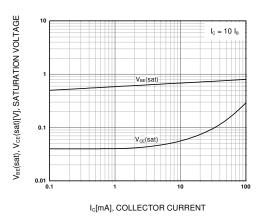


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

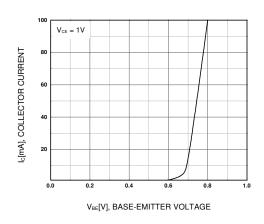


Figure 4. Base-Emitter On Voltage

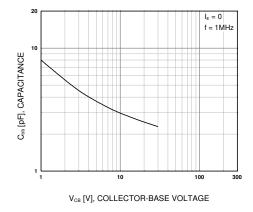


Figure 5. Collector Output Capacitance

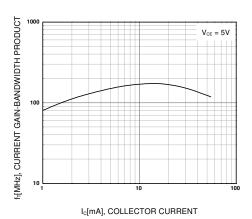
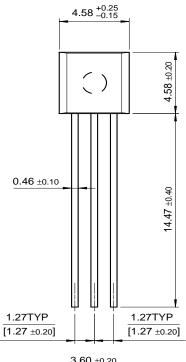


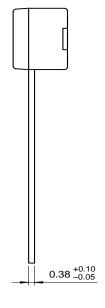
Figure 6. Current Gain Bandwidth Product

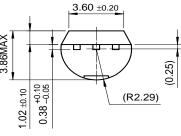
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# **Package Dimensions**

TO-92







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CoolFET™	FASTr™	MicroFET™	PowerTrench <sup>®</sup>	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS <sup>TM</sup>	SyncFET™
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E <sup>2</sup> CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	$I^2C^{TM}$	OCXTM	RapidConfigure™	UHC™
Across the board.	. Around the world.™	OCXPro™	RapidConnect™	UltraFET®
The Power Franc	hise™	OPTOLOGIC <sup>®</sup>	SILENT SWITCHER®	VCX™
Programmable Ad	ctive Droop™	OPTOPLANAR™	SMART START™	

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Rev. I1

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