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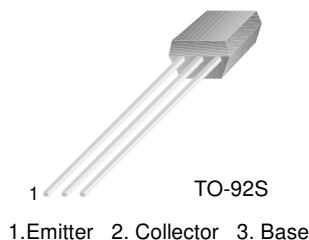


# KSC2787

KSC2787

## FM/AM RF AMP, MIX, CONV, OSC, IF

- Collector-Emitter Voltage :  $V_{CEO}=30V$
- High Current Gain Bandwidth Product :  $f_T=300MHz$  (TYP)
- Low Output Capacitance :  $C_{ob}=2.0pF$  (TYP)



## NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	50	V
$V_{CEO}$	Collector-Emitter Voltage	30	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	50	mA
$P_C$	Collector Power Dissipation	250	mW
$T_J$	Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ C$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C=10\mu A, I_E=0$	50			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C=5mA, I_B=0$	30			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\mu A, I_C=0$	5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=50V, I_E=0$			0.1	$\mu A$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB}=5V, I_C=0$			0.1	$\mu A$
$h_{FE}$	DC Current Gain	$V_{CE}=6V, I_C=1mA$	40		240	
$V_{BE}$ (on)	Base-Emitter On Voltage	$V_{CE}=6V, I_C=1mA$		0.67	0.75	V
$V_{CE}$ (sat)	Collector-Emitter Saturation Voltage	$I_C=10mA, I_B=1mA$		0.08	0.3	V
$f_T$	Current Gain Bandwidth Product	$V_{CE}=6V, I_C=1mA$	150	300		MHz
$C_{ob}$	Output Capacitance	$V_{CB}=6V, I_E=0, f=1MHz$		2.0	2.5	pF

### $h_{FE}$ Classification

Classification	R	O	Y
$h_{FE}$	40 ~ 80	70 ~ 140	120 ~ 240

# Typical Characteristics

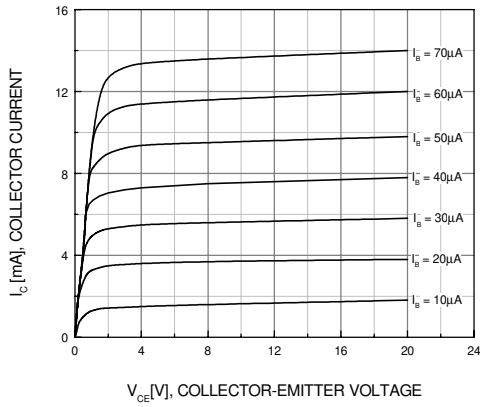


Figure 1. Static Characteristics

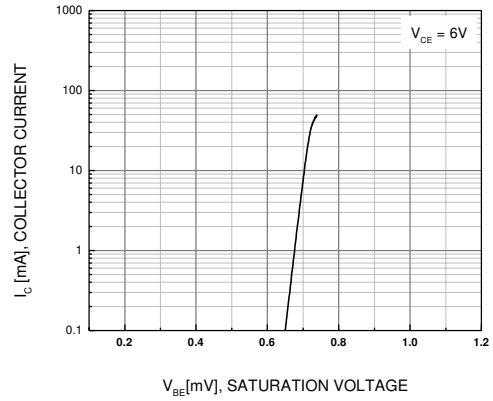


Figure 2. Base-Emitter On Voltage

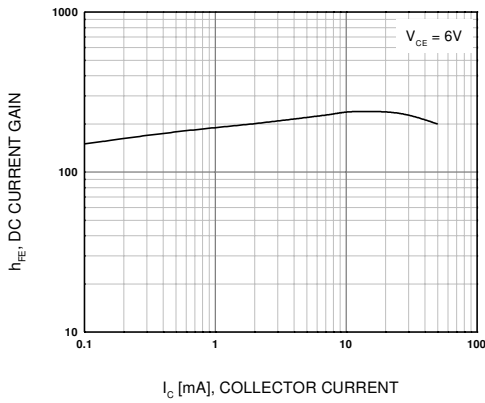


Figure 3. DC Current Gain

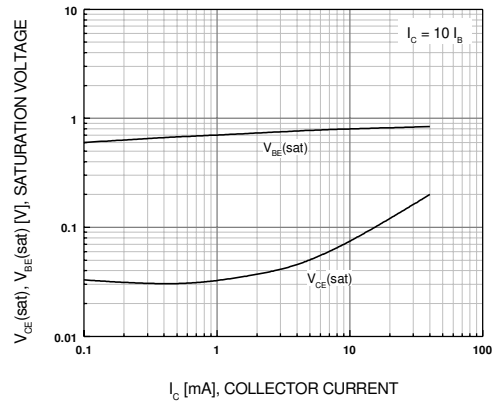


Figure 4. Saturation Voltage

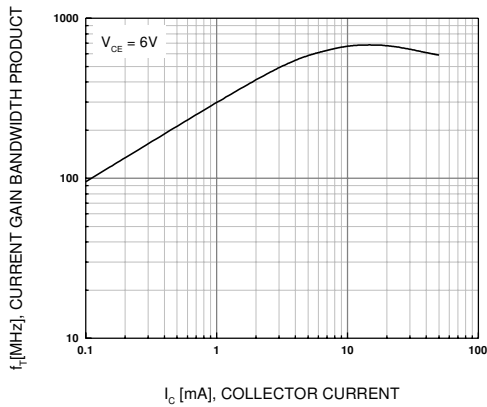


Figure 5.  $f_T - I_C$

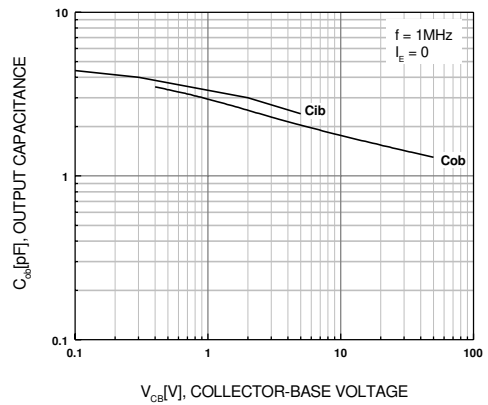
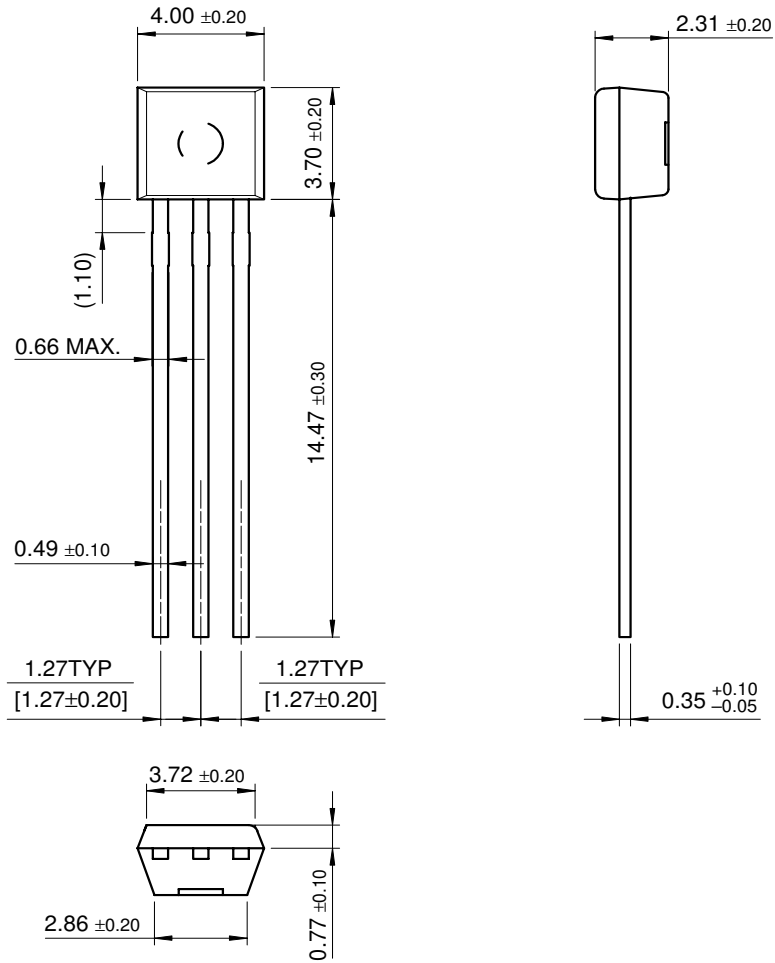


Figure 6. Output Capacitance

# Package Dimensions

## TO-92S



Dimensions in Millimeters

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ActiveArray <sup>TM</sup>	FACT Quiet series <sup>TM</sup>	ISOPLANAR <sup>TM</sup>	POP <sup>TM</sup>	Stealth <sup>TM</sup>
Bottomless <sup>TM</sup>	FAST <sup>®</sup>	LittleFET <sup>TM</sup>	Power247 <sup>TM</sup>	SuperSOT <sup>TM</sup> -3
CoolFET <sup>TM</sup>	FAST <sup>r</sup> <sup>TM</sup>	MicroFET <sup>TM</sup>	PowerTrench <sup>®</sup>	SuperSOT <sup>TM</sup> -6
CROSSVOL <sup>TM</sup>	FRFET <sup>TM</sup>	MicroPak <sup>TM</sup>	QFET <sup>TM</sup>	SuperSOT <sup>TM</sup> -8
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