



**THE DATASHEET OF  
KSA1241YTU**

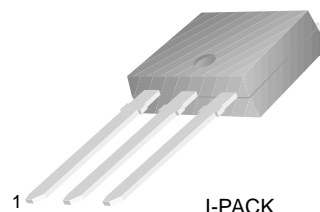


# KSA1241

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## Power Amplifier Applications

- Low Collector-Emitter Saturation Voltage
- Complement to KSC3076



I-PACK  
1. Base 2. Collector 3. Emitter

## PNP Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Ratings	Units
$V_{CBO}$	Collector-Base Voltage	- 55	V
$V_{CEO}$	Collector-Emitter Voltage	- 50	V
$V_{EBO}$	Emitter-Base Voltage	- 5	V
$I_B$	Base Current	- 1	A
$I_C$	Collector Current	- 2	A
$P_C$	Collector Dissipation ( $T_a=25^\circ\text{C}$ )	1	W
$P_C$	Collector Dissipation ( $T_C=25^\circ\text{C}$ )	10	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$

### Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = - 10\text{mA}, I_B = 0$	- 50			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = - 50\text{V}, I_E = 0$			- 1	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = - 5\text{V}, I_C = 0$			- 1	$\mu\text{A}$
$h_{FE1}$ $h_{FE2}$	DC Current Gain	$V_{CE} = - 2\text{V}, I_C = - 0.5\text{A}$ $V_{CE} = - 2\text{V}, I_C = - 1.5\text{A}$	70 40		240	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = - 1\text{A}, I_B = - 0.05\text{A}$			- 0.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = - 1\text{A}, I_B = - 0.05\text{A}$			- 1.2	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = - 2\text{V}, I_C = - 0.5\text{A}$		100		MHz
$C_{ob}$	Output Capacitance	$V_{CB} = - 10\text{V}, f = 1\text{MHz}$		40		pF
$t_{ON}$	Turn ON Time	$V_{CC} = - 30, I_C = - 1\text{A}$		0.1		$\mu\text{s}$
$t_{STG}$	Storage Time	$I_{B1} = - I_{B2} = - 0.05\text{A}$		1		$\mu\text{s}$
$t_F$	Fall Time	$R_L = 30\Omega$		0.1		$\mu\text{s}$

## $h_{FE}$ Classification

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



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