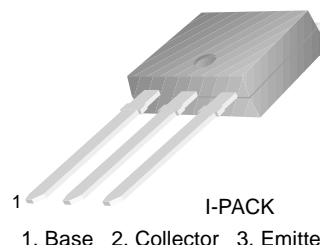


**Power Amplifier Applications**

- Low Collector-Emitter Saturation Voltage
- Complement to KSA 1241



**NPN Epitaxial Silicon Transistor**

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	50	V
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	2	A
$I_B$	Base Current	1	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

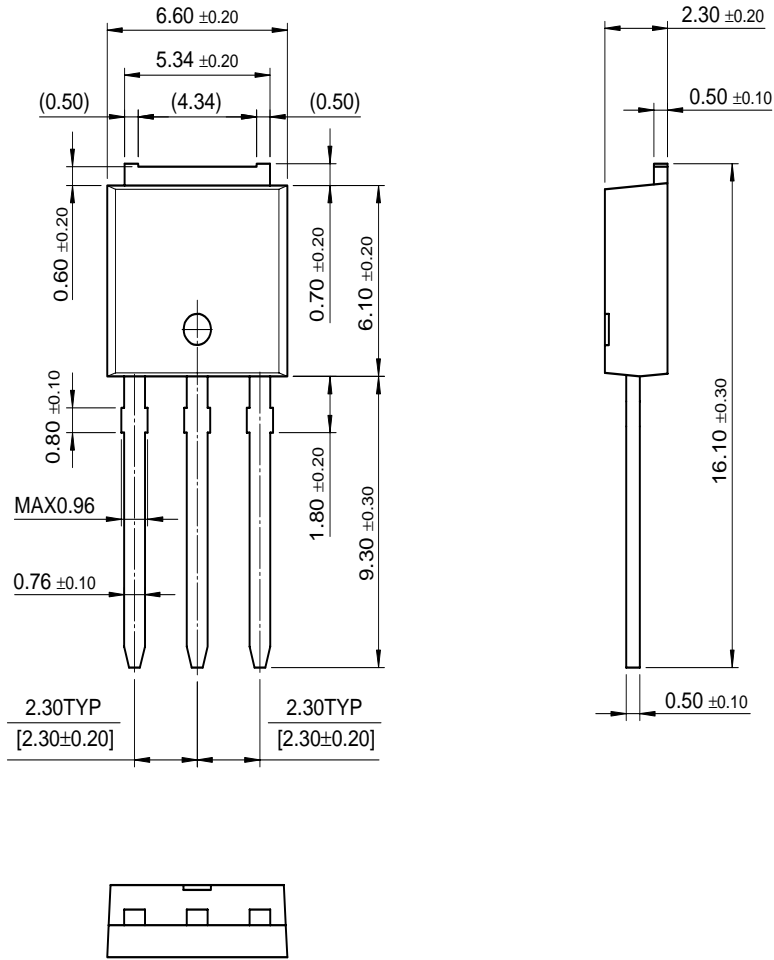
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 10\text{mA}, I_B = 0$	50			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = 50\text{V}, I_E = 0$			1	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = 5\text{V}, I_C = 0$			1	$\mu\text{A}$
$h_{FE1}$ $h_{FE2}$	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	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		30		pF
$t_{ON}$	Turn ON Time	$V_{CC} = 30\text{V}, I_C = 1\text{A}$		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		$\mu\text{s}$

**$h_{FE1}$  Classification**

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

# Package Dimensions

## I-PAK



Dimensions in Millimeters

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E <sup>2</sup> CMOS™	PowerTrench®	VCX™
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## PRODUCT STATUS DEFINITIONS

### Definition of Terms

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