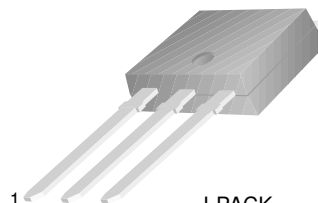


**Power Amplifier Applications**

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



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

**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



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FACT™	QFET™	
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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

## PRODUCT STATUS DEFINITIONS

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