

# MJD3055

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## General Purpose Amplifier Low Speed Switching Applications D-PAK for Surface Mount Applications

- Lead Formed for Surface Mount Applications (No Suffix)
- Straight Lead (I-PAK, "-I" Suffix)
- Electrically Similar to Popular MJE3055T
- DC Current Gain Specified to 10A
- High Current Gain - Bandwidth Product:  
 $f_T = 2\text{MHz (MIN)}, I_C = 500\text{mA}$



## 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	70	V
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	10	A
$I_B$	Base Current	6	A
$P_C$	Collector Dissipation ( $T_C=25^\circ\text{C}$ )	20	W
	Collector Dissipation ( $T_a=25^\circ\text{C}$ )	1.75	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.	Max.	Units
$V_{CEO(sus)}$	* Collector-Emitter Sustaining Voltage	$I_C = 30\text{mA}, I_B = 0$	60		V
$I_{CEO}$	Collector Cut-off Current	$V_{CE} = 30\text{V}, I_E = 0$		50	$\mu\text{A}$
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = 70\text{V}, I_E = 0$		2	mA
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = 5\text{V}, I_C = 0$		0.5	mA
$h_{FE}$	*DC Current Gain	$V_{CE} = 4\text{V}, I_C = 4\text{A}$	20	100	
		$V_{CE} = 4\text{V}, I_C = 10\text{A}$	5		
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = 4\text{A}, I_B = 0.4\text{A}$		1.1	V
		$I_C = 10\text{A}, I_B = 3.3\text{A}$		8	V
$V_{BE(on)}$	* Base-Emitter ON Voltage	$V_{CE} = 4\text{V}, I_C = 4\text{A}$		1.8	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = 10\text{V}, I_C = 500\text{mA}$	2		MHz

\* Pulse Test:  $PW \leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$

# Typical Characteristics

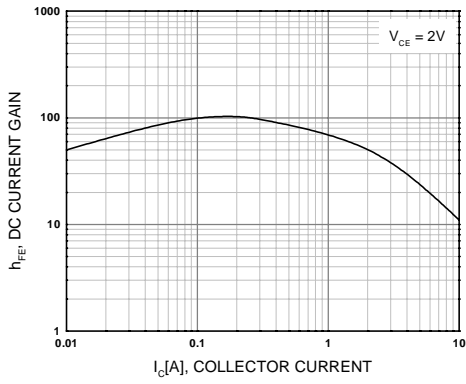


Figure 1. DC current Gain

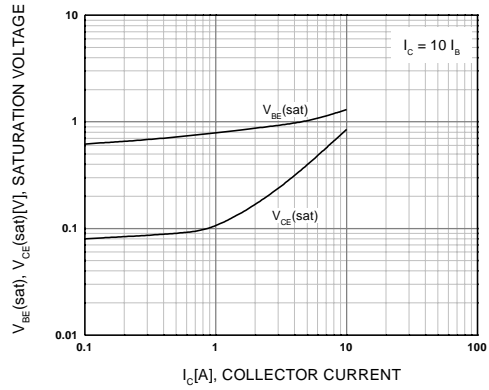


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

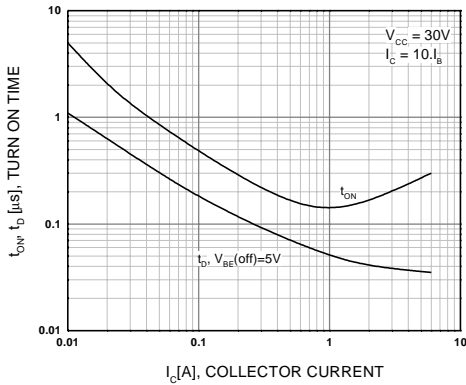


Figure 3. Turn On Time

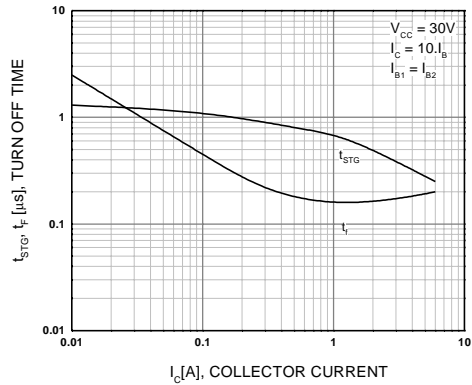


Figure 4. Turn Off Time

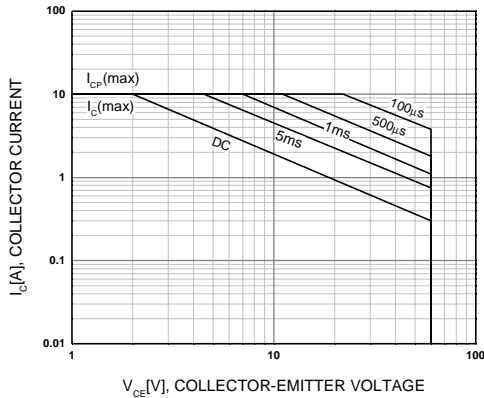


Figure 5. Safe Operating Area

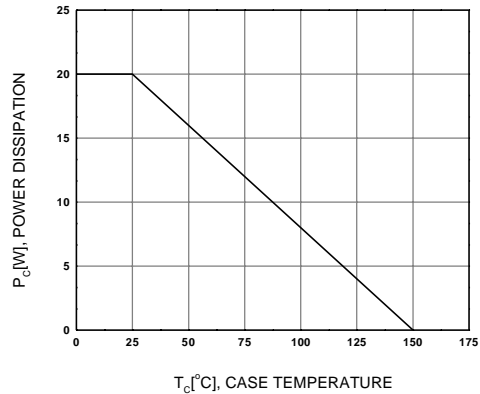
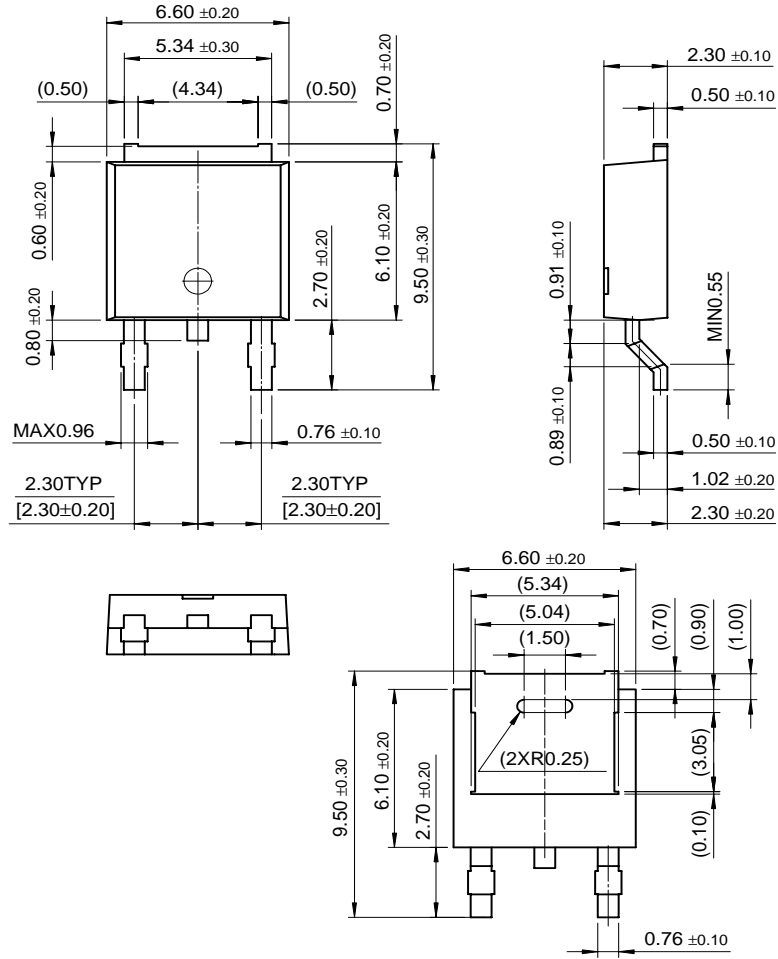


Figure 6. Power Derating

# Package Dimensions

## D-PAK



Dimensions in Millimeters

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