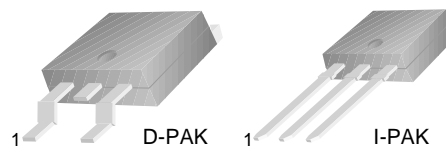


## MJD32/32C

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

- Load Formed for Surface Mount Application (No Suffix)
- Straight Lead (I-PAK, "- I" Suffix)
- Electrically Similar to Popular TIP32 and TIP32C



1.Base 2.Collector 3.Emitter

### PNP Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	- 40	V
	: MJD32 : MJD32C	- 100	V
$V_{CEO}$	Collector-Emitter Voltage	- 40	V
	: MJD32 : MJD32C	- 100	V
$V_{EBO}$	Emitter-Base Voltage	- 5	V
$I_C$	Collector Current (DC)	- 3	A
$I_{CP}$	Collector Current (Pulse)	- 5	A
$I_B$	Base Current	- 1	A
$P_C$	Collector Dissipation ( $T_C=25^\circ\text{C}$ )	15	W
	Collector Dissipation ( $T_a=25^\circ\text{C}$ )	1.56	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	- 65 ~ 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	$I_C = - 30\text{mA}, I_B = 0$	-40		V
	: MJD32 : MJD32C				
$I_{CEO}$	Collector Cut-off Current	$V_{CE} = - 40\text{V}, I_B = 0$ $V_{CE} = - 60\text{V}, I_B = 0$		-50	$\mu\text{A}$
	: MJD32 : MJD32C				
$I_{CES}$	Collector Cut-off Current	$V_{CE} = - 40\text{V}, V_{BE} = 0$ $V_{CE} = - 100\text{V}, V_{BE} = 0$		-20	$\mu\text{A}$
	: MJD32 : MJD32C				
$I_{EBO}$	Emitter Cut-off Current	$V_{BE} = - 5\text{V}, I_C = 0$		-1	mA
$h_{FE}$	* DC Current Gain	$V_{CE} = - 4\text{V}, I_C = - 1\text{A}$ $V_{CE} = - 4\text{V}, I_C = - 3\text{A}$	25	10	50
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = - 3, I_B = - 375\text{mA}$		-1.2	V
$V_{BE(on)}$	* Base-Emitter ON Voltage	$V_{CE} = - 4\text{A}, I_C = - 3\text{A}$		-1.8	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = - 10\text{V}, I_C = - 500\text{mA}$	3		MHz

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

# Typical Characteristics

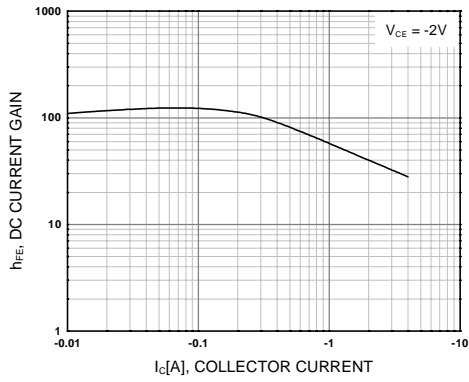


Figure 1. DC current Gain

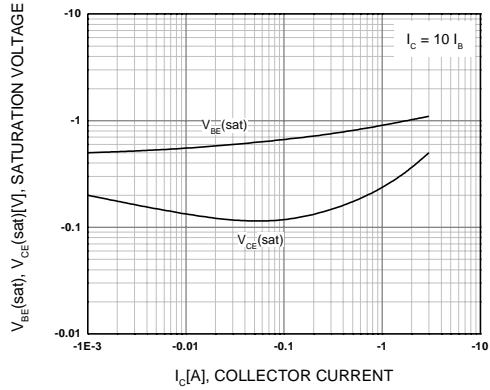


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

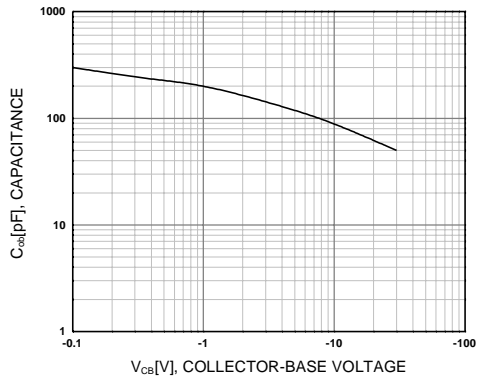


Figure 3. Collector Capacitance

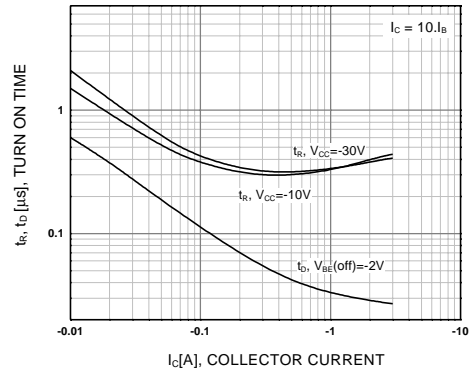


Figure 4. Turn On Time

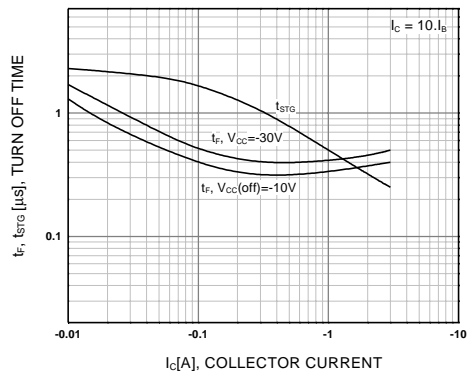


Figure 5. Turn Off Time

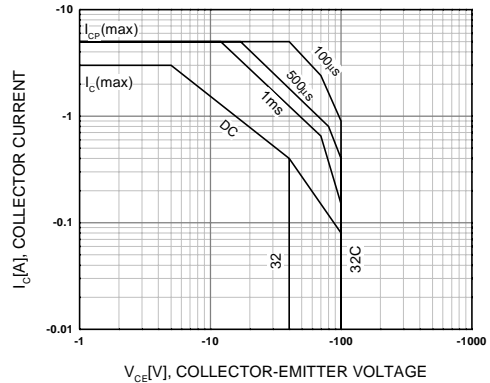


Figure 6. Safe Operating Area

# Typical Characteristics (Continued)

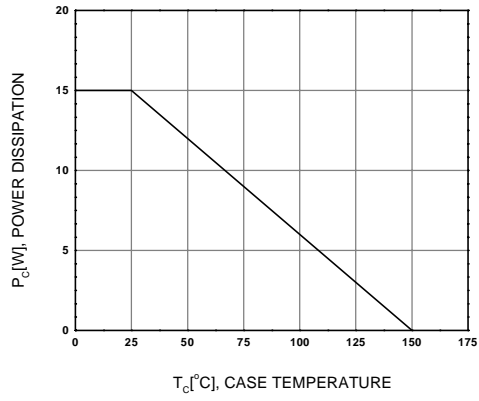


Figure 7. Power Derating



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