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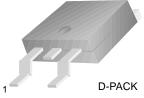
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FJD3076

Power Amplifier Applications

Low Collector-Emitter Saturation Voltage



1. Base 2. Collector 3. Emitter

NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units	
V _{CBO}	Collector-Base Voltage	40	V	
V _{CEO}	Collector-Emitter Voltage	32	V	
V _{EBO}	Emitter-Base Voltage	5	V	
I _C	Collector Current	2	А	
P _C	Collector Dissipation (T _a =25°C)	1	W	
	Collector Dissipation (T _C =25°C)	10	W	
T _J	Junction Temperature	150	°C	
T _{STG}	Storage Temperature	- 55 ~ 150	°C	

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV _{CEO}	Collector-Emitter Breakdown Voltage	$I_{C} = 1 \text{mA}, I_{B} = 0$	32			V
BV _{CBO}	Collector-Base Breakdown Voltage	$I_{C} = 50 \mu A$	40			V
BV _{EBO}	Emitter-Base Breakdown Voltage	$I_E = 50\mu A$	5			V
I _{CBO}	Collector Cut-off Current	$V_{CB} = 20V, I_{E} = 0$			1	μΑ
I _{EBO}	Emitter Cut-off Current	$V_{EB} = 4V, I_{C} = 0$			1	μΑ
h _{FE}	DC Current Gain	$V_{CE} = 3V, I_{C} = 0.5A$	130		390	
V _{CE} (sat)	Collector-Emitter Saturation Voltage	$I_C = 2A, I_B = 0.2A$		0.5	0.8	V
f _T	Current Gain Bandwidth Product	$V_{CE} = 5V, I_{E} = -0.5A,$ f = 100MHz		100		MHz
C _{ob}	Output Capacitance	$V_{CB} = 10V$, $I_E = 0A$, $f = 1MHz$		50		pF

Typical Characteristics

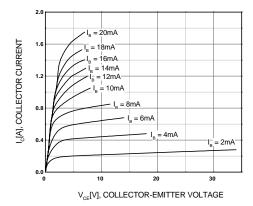


Figure 1. Static Characteristic

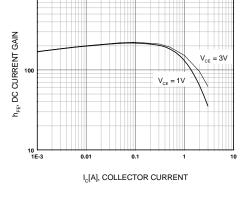


Figure 2. DC Current Gain

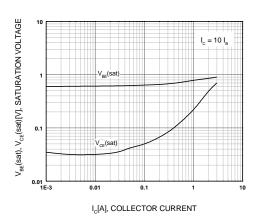


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

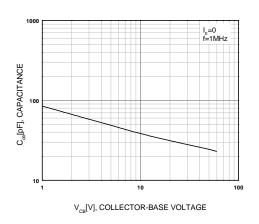


Figure 4. Collector Output Capacitance

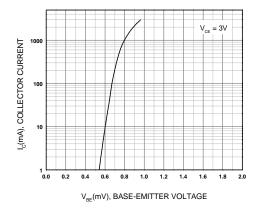


Figure 5. Base-Emitter On Voltage

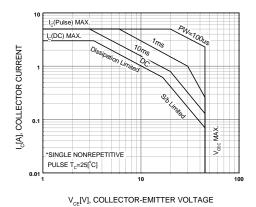
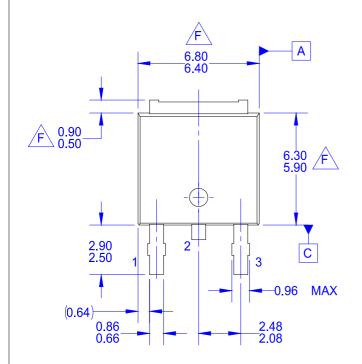
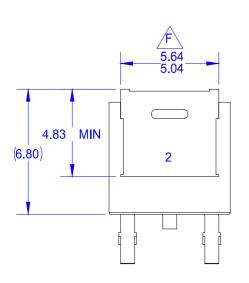


Figure 6. Safe Operating Area

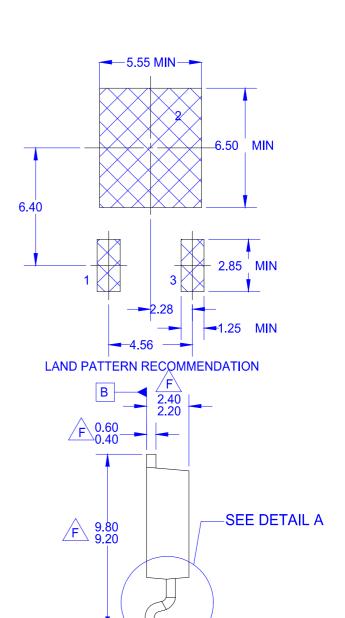
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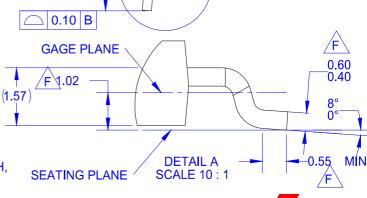




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