DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

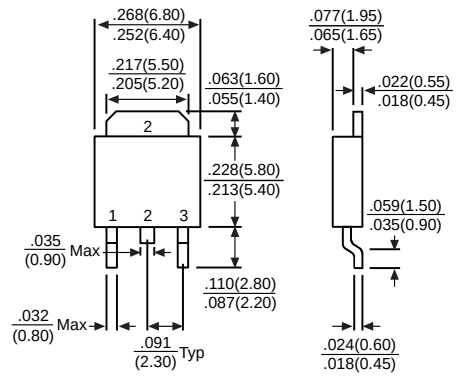
MJD31C

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

Designed for use in general purpose amplifier and switching applications.

TO-252(DPAK)



Dimensions in inches and (millimeters)

Pinning

1 = Base
2 = Collector
3 = Emitter

Absolute Maximum Ratings(T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	3	A
Total Power Dissipation(T_C=25°C)	P_D	15	W
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Base Breakdown Volatge	BV_{CBO}	100	-	-	V	I_C=1mA, I_E=0
Collector-Emitter Breakdown Voltage	BV_{CEO}	100	-	-	V	I_C=30mA, I_B=0
Collector Cutoff Current	I_{CES}	-	-	20	μA	V_{CE}=100V, V_{EB}=0
	I_{CEO}	-	-	50	μA	V_{CE}=60V, I_B=0
Emitter Cutoff Current	I_{EBO}	-	-	1	mA	V_{EB}=5V, I_C=0
Collector-Emitter Saturation Voltage(1)	$V_{CE(sat)}$	-	-	1.2	V	I_C=3A, I_B=375mA
Base-Emitter On Voltage(1)	$V_{BE(on)}$	-	-	1.8	V	I_C=3A, V_{CE}=4V
DC Current Gain(1)	h_{FE1}	25	-	-	-	I_C=1A, V_{CE}=4V
	h_{FE2}	10	-	50	-	I_C=3A, V_{CE}=4V
Transition Frequency	f_T	3	-	-	MHz	I_C=0.5A, V_{CE}=10V, f=1MHz

(1)Pulse Test: Pulse Width ≦ 380μs, Duty Cycle ≦ 2%