

SMD Power Transistor (NPN)

Features

- Designed for general purpose amplifier and low speed switching applications
- RoHS compliance



D-PACK
(TO-252)



Mechanical Data

Case:	D-PACK(TO-252), Plastic Package
Terminals:	Solderable per MIL-STD-202G, Method 208
Weight:	0.3 grams

Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	MJD3055	Unit
	Marking Code	MJD3055	
V_{CEO}	Collector-Emitter Voltage	60	V
V_{CBO}	Collector-Base Voltage	70	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current Continuous	10	A
I_B	Base Current	6	A
P_D	Power Dissipation at T _C =25°C	20	W
	Derate above 25°C	0.16	W/°C
*P_D	Power Dissipation at T _A =25°C	1.75	W
	Derate above 25°C	0.014	W/°C
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 to +150	°C

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MJD3055

Thermal Characteristics

Symbol	Description	MJD3055	Unit
RthJC	Thermal Resistance from Junction to Case	6.25	°C/W
*RthJA	Thermal Resistance from Junction to Ambient	71.4	°C/W

Note: *These ratings are applicable when surface mounted on the minimum pad sizes recommended.

Electrical Characteristics ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Off Characteristics

Symbol	Description	Min.	Max.	Unit	Conditions
V _{CEO}	Collector Emitter Voltage	60	-	V	I _C =1mA, I _B =0
I _{CEO}	Collector Cut-off Current	-	50	μA	V _{CE} =30V, I _B =0
I _{CEX}	Collector Cut-off Current	-	0.02	mA	V _{CE} =70V, V _{BE} (OFF)=1.5V,
		-	2	mA	V _{CE} =70V, V _{BE} (OFF)=1.5V, T _C =150°C
I _{CBO}	Collector Cut-off Current	-	0.02	mA	V _{CB} =70V, I _E =0
		-	2	mA	V _{CB} =70V, I _E =0, T _C =150°C
I _{EBO}	Emitter Cut-off Current	-	0.5	mA	V _{EB} =5V, I _C =0

On Characteristics (**)

Symbol	Description	Min.	Max.	Unit	Conditions
V _{CE(sat)}	Collector Emitter Saturation Voltage	-	1.1	V	I _C =4A, I _B =0.4A
		-	8	V	I _C =10A, I _B =3.3A
V _{BE(on)}	Base Emitter on Voltage	-	1.8	V	V _{CE} =4V, I _C =4A
h _{FE}	D.C. Current Gain	20	100		V _{CE} =4V, I _C =4A
		5	-		V _{CE} =4V, I _C =10A

Note: ** Pulse Test: Pulse Width≤300μs, Duty Cycle≤2%

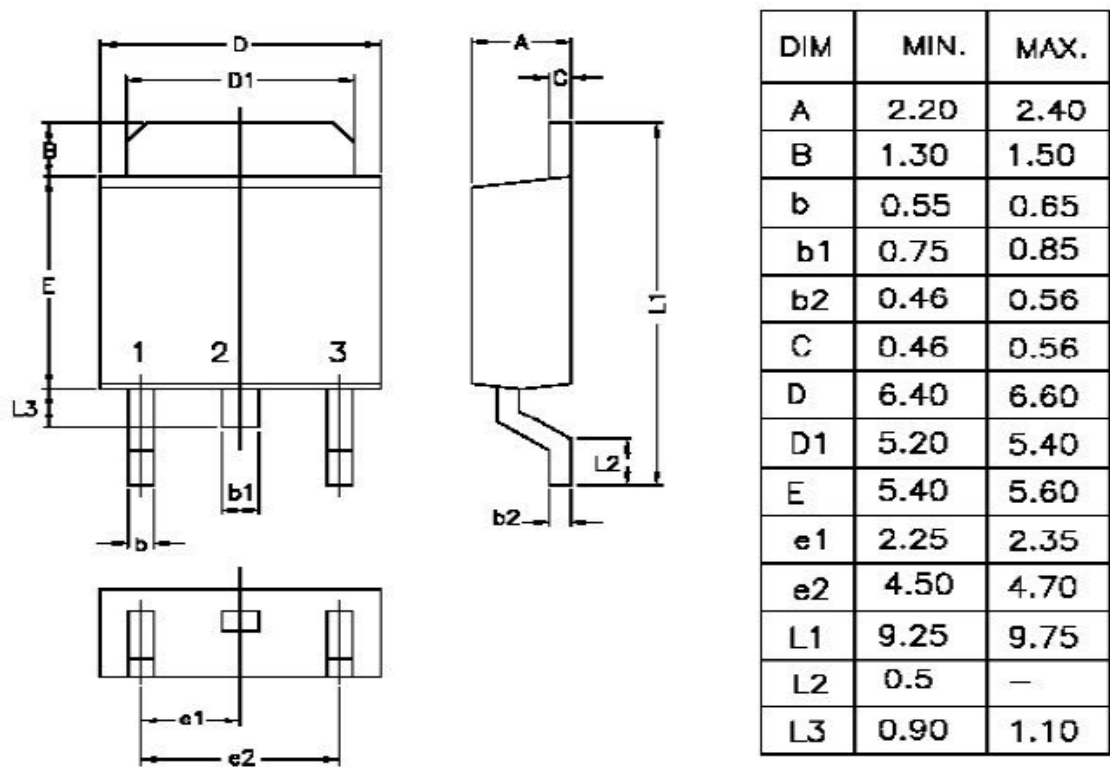
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Dynamic Characteristics

Symbol	Description	Min.	Typ.	Unit	Conditions
f_T	Current Gain Bandwidth Product	3	-	MHz	$V_{CE}=10V$, $I_C=500mA$, $f=1MHz$

Dimensions in mm



PIN CONFIGURATION

1. BASE
2. COLLECTOR
3. EMITTER

**D-PACK
(TO-252)**

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